





UNITED SOCIETY OF CHEMISTS AND DRUGGISTS.

MEETING AT PLYMOUTH.

IN accordance with a notice issued by Mr. Herron, the Local Secretary, an influential meeting of Chemists and Druggists was held at the Globe Hotel on the 16th ult., Mr. Wey in the chair.

Mr. BUOTT, the Secretary, who attended to explain the present position and future policy of the Society, expressed upon the gratification he felt in having an opportunity to visit the chemists and druggists of Plymouth and Devonport, under circumstances which suggested so many pleasing topics for consideration, and pointed especially to the improved relations of the trade which had been created by the friendly influence of the United Society. He said it was a matter of rejoicing that with union the trade had acquired the power to impress its wants and wishes upon the legislature. Government had justly taunted them with being divided; but they were now agreed. They agreed that the dispenser of medicine should prove his qualification for such a responsible duty; they agreed that there should be an institution armed with legal power to enforce examination; they agreed that it was reasonable, just, and desirable that the Pharmaceutical Society should be the institution so armed; and they also agreed that the governing body of the trade should embrace every existing chemist and druggist willing to support it upon the principle of equality of right and privilege, and honour to whom honour was due. The union now enjoyed did not only give them power, it also gave them peaceful progress. It was gathering round them commercial, social, and educational advantages. During the seven years that the United Society had shed its genial influence over the trade, the business of a chemist and druggist had increased 25 per cent. in value; an assistant who formerly could only get £40 per annum, could now readily obtain £50; and early and Sunday closing had in some towns become a system, whilst in many others the question was making way; and he was happy to observe that in South Wales the chemists and druggists did not only close early, but kept a mid-week half holiday with the other tradesmen. One of the pleasing signs of the times was the increasing desire of assistants to acquire useful knowledge. In illustration he could point to a town where the assistants had expressed a desire to form an association amongst themselves for scientific investigation. He did not mention this in approbation of such a plan, being decidedly of opinion that the more assistants availed themselves of the moral, pecuniary, intellectual, and friendly support of their employers in their pursuit after knowledge, the more likely they were to succeed; but he mentioned it as a proof of the yearning of assistants for intellectual progress. Another pleasant thing to contemplate was the friendly relation subsisting between assistants and their employers. Young men were becoming more intelligent, more submissive to the authority, and considerate about the interests, of their employers than they had been; and there was a growing belief amongst employers that a youth should be permitted to blend recreation with his daily work so as to prepare the broad shoulder for the inevitable burden of life, and to knit the brain, the muscle, and the nerve into the stalwart man able to do battle with the world and win his way to fortune. The bill which had received the concurrence of the Pharmaceutical Society, the United Society of Chemists and Druggists, and the trade, would be brought into Parliament next session. This bill would at once improve both the social and pecuniary position of the trade, and the highest walk in the profession of Pharmacy might be trodden by those who sought fame and fortune. Since leaving London he (Mr. Buott) had visited thirty towns in the South and West of England; and such was the confidence of the trade in the goodness of the cause and the integrity and zeal with which it was being worked to a successful issue, that nearly every outside chemist and druggist in those towns had been added to the Society;

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and it was his belief that if his physical powers were equal to the opportunity, the whole unenfranchised trade might be added to the United Society of Chemists and Druggists. There never was a Society with a better cause or brighter prospects. Was there in that meeting a heart without sympathy with such a cause, or a hand that would not work for its success? It was the glory of the chemists and druggists of the North of England that they laid the foundation of the Society; let it be the glory of those of the South and the West of England to bring on the topstone triumphantly. In a few months all hands must be engaged, when, he trusted there would be such a long pull, such a strong pull, and such a pull altogether, that the Bill, the whole Bill, and nothing but the Bill for an incorporation of the trade would be their reward.

At the conclusion of Mr. Buott's address,

Mr. DICKINSON proposed, and Mr. BENNETT seconded, the following resolution, which was adopted by the meeting:—

"That this meeting is much gratified with the good understanding now subsisting between the Pharmaceutical Council and the Executive of the United Society of Chemists and Druggists; that it approves generally of the principles of the proposed Amended Pharmacy Bill for the regulation of the trade, and promises its best efforts to secure the success of that Bill in Parliament."

It was then proposed by Mr. HERRON, seconded by Mr. DAMPRELY,—

"That in the judgment of this meeting, to subject existing assistants to any examination, or to any terms whatever, beyond those imposed upon employers as a condition of membership with the Pharmaceutical Society under the contemplated Bill would not only be unjust, but highly impolitic, as likely to disturb the peace and unanimity now pervading the trade and thereby to endanger the success of the Bill in Parliament."

After a vote of thanks to Mr. Buott, and the Chairman, the meeting terminated.

DUNDEE CHEMISTS' ASSOCIATION.

PRESENTATION TO MR. HODGE.

THE proceedings in connection with the late meeting of the British Pharmaceutical Conference in Dundee were brought to a close by the members of the Dundee Chemists' Association, by a supper. Mr. David Russell, the President of the Association, occupied the chair. In the course of the evening the Chairman expressed the thanks of the Association to Mr. James Hodge for the valuable services which he had rendered as Local Secretary of the British Pharmaceutical Conference; and then, in name and on behalf of the Association, presented Mr. Hodge with a substantial and handsome-looking album in recognition of his labour. The album was mounted with a chaste silver plate, on which the following inscription was engraven:—"Presented to Mr. James Hodge by the Members of the Dundee Chemists' Association, in token of their appreciation of his services as Local Secretary of the British Pharmaceutical Conference, held at Dundee Sept. 3—6, 1867." The album contained a number of *cartes de-visite* of the members of the Association.

UNIVERSITY OF LONDON.

THE following are lists of candidates who passed the respective examinations indicated:—

SECOND B.SC. EXAMINATION.

PASS EXAMINATION.

First Division.—Brown, James Campbell, University of Aberdeen and Royal School of Mines.

Second Division.—Auderson, Tempest, University College; Barlow, Thomas, Owen's College; Killick, William Donald, London Hospital; Smith, Alfred Micaiah, Owen's College; Spink, John, private study; Watson, David, Royal School of Mines; Watts, John, private study.

ORGANIC CHEMISTRY AND GEOLOGY AND PALEONTOLOGY ONLY.

First Division.—Bottomley, James, B.A., Owen's College.

Second Division.—Pearsall, Henry Mander, B.A., New and University.

LAW AND CRIME.

THE END OF A BANKRUPT CHEMIST.

At the Thames Police Court on the 15th ult., Edward Milton, described as a man having no home and a chemist, was brought up on remand, charged with feloniously embezzling £13, the moneys of Mr. W. J. Matthews, auctioneer, of No. 4, Stepney-green, and also stealing 5s. and a jacket, the money and property of George William Edwards, of the same place. The prisoner formerly carried on business in the Isle of Dogs, but he became bankrupt; Mr. Matthews, the prosecutor, sold off his stock, and afterwards took him into his employ as delivery clerk. A few weeks since there was a sale of a publican's effects in Wapping-wall, which Mr. Matthews and the prisoner attended, and some property was knocked down to a Mr. H. Matthews (not related to the prosecutor), of Southwark-bridge-road, for £11 3s. Mr. H. Matthews paid a deposit of 10s., and subsequently the balance to the prisoner, who immediately afterwards absconded. Shortly after the prisoner surrendered himself to Acting-Sergeant Swinburne, of the Yorkshire constabulary, at the Northallerton station. He said he was tired and miserable, and that he had robbed his employer of £12 or £13. He also said he had committed other offences. The prisoner was taken before Mr. John Hodgson, a Yorkshire magistrate, and afterwards sent to London. He made no defence. He said he was a miserable wretch, and lost his wife by cholera last year. The second case was not gone into, and Mr. Benson committed the prisoner for trial.

ACCIDENTAL POISONING.

A LOCKMAKER, of Broad-street, Wolverhampton, named Stick, age fifty, with his wife, two sons—one aged sixteen, and a daughter, aged 10, have narrowly escaped death from poisoning. The woman mixed a teaspoonful of what she supposed to be flour, to thicken some gravy, and all the family soon after dinner became seriously ill. Mr. Dunn, surgeon, was called in at night, and he discovered that they were all suffering from the effects of poison. Directed to the flour, he at once discovered that it contained arsenic. All the family, and in particular the girl, remained in a precarious state throughout the night; but ultimately all, except the woman, recovered. It has transpired that the poison got to Stick's house from the house of a greengrocer named Davies, living in the same street, to whom another daughter of Stick is servant. Davies had bought it on the previous day at a sale on the premises of a publican named Sergeant, who keeps the Boat Inn, on the canal bank of the Cannock-road in that town. Sergeant, two years ago, mixed it with some flour to poison rats, and when his effects were sold on Thursday, under a distraint, the mixture was in a small jar upon the head of a barrel which Davies bought. When he had the barrel, he maintained that he had bought the jar likewise, and took it home with him. Stick, the servant girl, was ordered to throw it into the hog tub; but deeming it to be of some value, she took a portion of it to her parent's house, where it was thought to be pure flour.

GOSSIP.

At the London Institution, Finsbury-circus, Mr. E. T. Chapman will commence, on March 9, a course of eight lectures on the Chemistry of Metallurgy; Professor Bentley will also deliver a course of eight lectures, commencing April 2, on our Common Garden and Wild Plants.

Lord Wrottesley, a nobleman whose name has long been associated with the scientific institutions of the country, died on the 27th ult.

The meteorological returns collected by Mr. Glaisher, the President of the Meteorological Society, from fifty districts of England, show as the highest temperatures of the year in those places 90° at Manchester and Leeds, 90.1 at Boston, and 91.2 at Royston—all in the month of August. The returns include several of the watering-places, and show a temperature of 78.5 at Sidmouth, 79.2 at Worthing, 81.9 at Eastbourne, 82 at Bournemouth, 83.2 at Tunbridge Wells, 84.2 at Bath, 84.9 at Clifton, 88 at Llandudno.

The distributors of Crane's Charity for the relief of sick

scholars at Cambridge give notice that they intend to meet at Trinity College Lodge on Tuesday, the 19th inst., for the purpose of considering and determining the claims of applicants for the benefit of this charity. Grants will be made on account of medicine, medical attendance, nursing, diet, and other necessities in sickness. The applications of scholars must be made by the tutors of their respective colleges, and contain full particulars both of the medical and other charges and of the circumstances of the applicants.

The low death-rate and high birth-rate of the third quarter of the present year caused the number of deaths to be less than half the number of births in eight of the forty counties of England—namely, Wilts, Dorset, Somerset, Monmouth, Worcester, Salop, Stafford, and Rutland; and also in three of the twelve counties of Wales—Glamorgan, Brecknock, and Montgomery. The same may very nearly be said of five other English counties—Bucks, Cambridge, Essex, Hereford, and Lincoln.

The large attendance of members at the House of Commons last Session made it necessary to send more air than usual through the House. Upwards of 2,500,000 cubic feet were supplied per hour. It was originally designed to supply air from a great height—namely, from the clock tower, but it was found by experience that the air was not so pure as the air from below, and it is now drawn from the two courts of the House—the Star Court and the Commons-court. Complaints were made that a smell of tar, or a smell from something going on by the side of the river, was drawn into the House. The average temperature maintained in the House is 62°. In hot weather the air cannot be kept down to that, but the greater heat is then counteracted by increasing the velocity of the air.

A correspondent of the *Pall-Mall Gazette* warns the public against attempts at vitriol throwing:—"On Thursday evening," he says, "my wife, while walking from Regent-square to Gower-street, had a large quantity of vitriol thrown upon her back by some person or persons unknown. She did not discover the fact until she had entered the house, and was proceeding to take off her cloak. On reaching her hands behind to pull off the sleeves her hands came in contact with the burning acid. It was then discovered that a large quantity of vitriol had been thrown upon her dress, and in a few seconds the velvet cloak (worth nine guineas) and a satin dress (worth six guineas) were destroyed in a manner that, only made us thankful that her person had escaped. There must have been half a pint, at least, of acid thrown upon the dress, reaching from a little below the collar downwards and all over the back. Not long ago another lady was the object of similar outrage while passing through Gordon-square about six o'clock in the evening." According to the *South London Press*, vitriol throwing at church doors in Camberwell by unknown persons has been so much complained of lately that the churchwardens of St. Giles's and Camden Churches have offered a reward of £20 for the detection of the guilty parties.

Dr. Lee's Reader in Chemistry (Mr. Harcourt) is now delivering a course of lectures in the laboratory at Christ Church, Oxford, intended for those who are commencing the study of chemistry.

We have to announce the death of Sir James South, F.R.S., at an advanced age. He was the son of a dispensing druggist who towards the close of the last century carried on business in Blackman-street, Borough; but James South entered upon a higher branch of the medical profession, and became a member of the Royal College of Surgeons. For some years he practised his profession in Southwark, and in the intervals of business pursued the study of astronomy, in connection with which he made some extremely valuable observations. In 1822 and 1823, in conjunction with Sir John Herschel, he compiled a catalogue of 380 double stars. After this he removed to Campden-hill, Kensington, where he constructed an observatory, to which he devoted the closest attention during the remainder of his life, and which has achieved an European fame. He was one of the founders of the Royal Astronomical Society, and was for a time its president. In 1830, on the recommendation of the Duke of Wellington, who was then Prime Minister, he received the honour of knighthood, and for several years past he has enjoyed a pension of £300 a year on the Civil List for his contributions to astronomical science.

We also announce with much regret the death of Professor J. W. McGauley, editor of the *Scientific Review*, author of several well-known works in various departments of science and literature. The late Professor was formerly lecturer on Natural Philosophy to the Board of National Education in Ireland, where he acquired a high and deserved reputation. Of late years he has contributed many important articles to scientific periodical literature. His sudden death has left his widow and four children entirely unprovided for. A committee of scientific and literary friends has been formed with a view of soliciting public sympathy in their behalf.

According to Mr. Hingston, the well-known surgeon of Montreal, the Franco-Canadians eat a great deal of meat; the Anglo-Canadians very little. The former are robust, and the diseases which predominate among them are those of the digestive apparatus. The English are less vigorous, and pulmonary diseases prevail among them. Here is a strong argument in favour of beef.

By the appointment of Sir William Fergusson and Mr. Paget as Serjeant-Surgeon and Serjeant-Surgeon Extraordinary to the Queen, two vacancies are created in the office of Surgeon-Extraordinary, and it is stated by the *British Medical Journal*, that the choice will fall on Mr. John Hilton, F.R.S., President of the Royal College of Surgeons, and Senior Surgeon to Guy's Hospital, and Mr. Prescott Hewett, F.R.S., of St. George's Hospital.

The annual registration of the names of gentlemen pursuing their professional studies at the eleven metropolitan hospitals—viz., Guy's, St. Bartholomew's, University College, King's College, St. Mary's, St. George's, St. Thomas's, the Middlesex, the London, Charing-cross, and Westminster, has just closed, and contrary to all expectation, the number, instead of decreasing, has greatly increased, as on the 17th of October, 1866, the total number at all the schools amounted to 1,043, including those students pursuing their studies, not only for the diplomas of fellowship and membership of the Royal College of Surgeons, but also for the dental licence of that institution. During the present session the number has increased to 1,125, including also dental students. The total number of new entries at all the hospitals amounts to 355. In an interesting analysis of the entries from 1850 down to the present time, which appears in the *Medical Times*, it is stated that since that year the number has never reached so high a figure excepting the *annus mirabilis* 1860, when the total was 1228, and the number of new entries 483.

A meeting of the local invitation committees of Exeter and Plymouth for securing the visit of the British Association to one of those places in 1869 was lately held to consider what steps should be taken to end the present rivalry. After much discussion it was decided to refer the question to the last three Presidents of the British Association—Professor Phillips, Mr. Grove, and the Duke of Buccleuch—to say which town should retire and help the other.

The lecture arrangements of the Royal Institution for the forthcoming season are very promising. The Christmas Lectures adapted to a juvenile auditory will be delivered as usual by Professor Tyndall, the subject of the course being Heat and Cold. On Tuesdays and Thursdays from January 28 to February 27 the same lecturer will expound the Discoveries of Faraday. On Saturdays from January 25 to April 4, Professor Rosece will lecture on the Chemistry of the Non-metallic Elements. On Thursdays and Saturdays from April 23 to May 2, Dr. Odling will lecture on Chemical Combination. The lecture hour is 3 o'clock.

The monthly meeting of the Quekett Microscopical Club was held at University College, on the 25th inst.; Mr. Arthur E. Durham, president, in the chair. Mr. S. J. McIntre read a paper "On Chelifers," in which he gave some interesting facts with regard to the habits, and mode of capture of these curious animals, resembling minute scorpions, and having the backward and sideway motions of crabs. Of the fifty-four known species, eight are British, and are chiefly found under the bark of trees, and in houses, amongst old papers, &c., often rendering good service by feeding on the insects which are usually so destructive in old libraries. Several living specimens were exhibited under the microscopes, where their activity in the pursuit of their prey was conspicuous. A paper by Mr. C. Nicolson, M.A., "On Object-glasses for the Microscope," was read. Nine members were elected.

The Silicated Carbon Filter Company have adopted a somewhat novel mode of advertising. They print their advertisement in pale letters upon good stout envelopes which they are supplying to the public at one shilling per thousand. We understand that they have disposed of an enormous number of these envelopes.

The office of the CHEMIST AND DRUGGIST is now closed at 5 o'clock, and on Saturdays at 2. The dinner hour has been done away with, but a quarter of an hour is allowed for luncheon. This arrangement for early closing appears to give great satisfaction to all persons employed on the establishment.

We have received specimen pages of a work that will be published about the middle of December, under the title of "*Owen's Conspectus*." It will give in a tabular form, the names and synonyms of all the articles in the British Pharmacopœia, 1867, together with lists of the preparations in which they enter the doses, notes on their operation and use, chemical symbols, specific gravities, &c. A blank column will be left on each page, so that the work may be used as a students' note-book, or druggists' private price-list. The idea is a good one, and if properly carried out a very useful work will be produced.

Mr. Joseph Ince has been elected a Fellow of the Geological Society.

GAZETTE.

BANKRUPTS.

ATTWATER, THOMAS CHIPPING, Liskeard, druggist.
BARTLETT, G. B., Upper Gloucester-place, Dorset-square, dentist.
BATCHELOR, H. F., Great Yarmouth, surgeon.
BEAUMONT, J. W., Sheffield, doctor of medicine.
CLAXTON, WILLIAM, Lincoln, soda water manufacturer.
DYER, ANDREW, Devizes, surgeon.
GILKES, THOMAS, late of Leominster, lamp-black manufacturer.
GOODALL, R. T., Northwingfield, Derbyshire, surgeon.
JONES, JOHN, Llandudno, chemist.
KENNARD, DAVID, sen., Lamborne, Berkshire, surgeon.
LOCKE, JAMES, Kingsdown, Bristol, medical rubber.
MEDD, JOSEPH, Gloucester, chemist.
PARRY, DASHWOOD, Hope, Flint, surgeon's assistant.
PRICE, JOHN, Rhayader, Radnorshire, chemist.
RIGG, CHARLES MERIT, Queen's-road, Norland-square, and Rochester and Ramsgate, doctor of medicine.
TEASDALE, J. T., Water-street, Bridge-street, Blackfriars, dealer in druggists' sundries.
THOMAS, RICHARD, Dover, chemist.

PARTNERSHIPS DISSOLVED.

ALLWORK and SANKEY, Maidstone, surgeons.
DRYDEN and RUFFE, Bingley, Yorkshire, surgeons.
FOREST OF DEAN CHEMICAL COMPANY, Cannon, Gloucestershire.
GREENHALGH, E., and THORNTON, C. C., Bradford, Manchester, manufacturing chemists.
HORSFALL, H. and T., Leeds, manufacturing chemists.
JONES, W., and Co., Middlesborough, chemical manufacturers; as far as regards I. SHARP.
MORRISON, S., and JONES, D., Clapham-road, Oxford-street, and Welbeck-street, Cavendish-square, medical practitioners.
OGLEBY, C., and Co., Paradise-street, Lambeth, wax-bleachers; as far as regards H. FIELD.
PROCTOR and TWIST, Liverpool, and GARTON and WOOLTON, Lancashire, veterinary surgeons.
ROSSER, W. and J., Llanelli, arsenic manufacturers.
SIMPSON and SON, Fore-street, Cripplegate, surgeons.
STILWELL, J., and VIPAN, W. H., Uxbridge, surgeons.
THEED and BROUGHION, Rhyl, Flintshire, surgeons.
WELCH and RAYNER, Nottingham, chemists.
WOOD and HASWELL, Monkwearmouth, tar-distillers.

SCOTCH SEQUESTRATION.

TAYLOR, C., Glasgow, soda-water maker.

THE SALE OF MEDICATED WINES.

A LETTER from the Commissioners of Inland Revenue has been placed at our disposal by an esteemed correspondent; and as it clearly defines the conditions under which preparations of orange wine may be sold by chemists without a license, we bring it before our readers.

[COPY.]

Inland Revenue, Somerset House,

11th October, 1867.

SIR,—I am directed by the Commissioners of Inland Revenue to acquaint you, in reply to your letter of the 24th ult., that you will not be required to take out a Sweets' license to enable you to sell Wine of citrate of Iron and Quinine Wine, so long as they are prepared as directed in the Pharmacopœia, and are sold to be used as medicines.

I am, sir, your obedient servant,

ADAM YOUNG, Assistant Secretary.

Mr. H. KING, 1, Churton-street, Pimlico.

LAVENDER CROP, 1867.

ACCORDING to the report of a great flower-growing firm at Grasse the unfavourable weather proved fatal to many of the plants before the gathering of the flowers, and consequently the entire yield is not half of a good crop. Prices continue to advance, and small distillers are under a great temptation to adulterate their oil. The quotations of the firm at the middle of last month were as follows, but the report intimated that they might be still further increased. *Lavender*: Picked flowers, per lb. 5s. 10d. to 6s. 6d.; pure, 5s. 5d.; super, 4s. 5d.; fine, 3s. 5½d.; second quality, 2s. 6½d. *Spike*, Pure, 3s. 1d.; super, 2s. 2d.; fine, 1s. 5½d.; second quality: 1s 3½d.

A CAUTION.

THE following paragraph from the *Lancet* will put chemists and druggists on their guard against an old swindler who may think it advisable to extend his field of action:—"We recommend our readers to caution their servants against the devices of an impostor, who, we learn, has been very successful during the last few days in his spoliation of medical men at the West-end of London. The individual in question, who is described as 'a dirty-looking old man, with the forefinger of his right hand missing,' calls when the master of the house is absent, and produces several bundles of pieces of cane neatly tied up, which, he represents Dr. — has ordered. He apologises for not having been able to bring them at the time at which they were expected, and regrets that he can only supply a portion, but the remainder will be sent to-morrow.' He tells the servant that Dr. — has ordered them at Apothecaries' Hall, and 'uses them in his practice.' We have before us a receipt which this swindler gave in one case where he was successful. It runs thus:—"From Apothecary Hall; six bundles, six shillings. Paid J. Johnstone." The pieces of cane closely resemble those which dentists use wherewith to apply pumice powder after scaling teeth."

CINCHONINE.

MR. JACOB HULLE, of Battersea, a manufacturer of hydrochlorate of cinchonine, calls attention to the annexed extracts from the report of the Bombay and Madras Commission appointed to ascertain the febrifuge value of the Cinchona Alkaloids other than Quinine:—

"The main conclusion which the members of the commission have derived from the data before them is, that the alkaloids hitherto but little valued in medicine are scarcely, if at all inferior, as therapeutical agents to quinine.

"So impressed are they of the value of these hitherto despised alkaloids, that the members of the commission are unanimous in considering that in the public service of this country, they may very advantageously be substituted in part for quinine.

"If three pounds of cinchonine can be obtained at the price of one pound of quinine, we consider that a great public good would result from the purchase of the larger quantity, as it would enable the officers of the medical department to benefit a much larger number of the population than they can now afford to treat, by prescribing quinine.

"As variously estimated they possess the same effects as quinine to the extent of one half or two-thirds.

"The proper dose given is,—

Quinine, 3 to 20 grns.

Cinchonine, 7 „ 20 „

POISONING BY CAUSTIC POTASH.—A death has recently occurred at Pendleton, caused by drinking the contents of a jug supposed to contain porter, but which in reality contained a solution of caustic potash. The deceased drank it on the 22nd of May, and lived until the 20th of September. Mr. Heywood, surgeon, Pendleton, who had attended the deceased, stated that he had been unable to swallow anything during his illness, and he attributed death to starvation in consequence of that inability. He had made a post-mortem examination of the body, and found a stricture of the œsophagus, extending over four or five inches, rendering swallowing an impossibility. The injury had been caused by taking caustic potash.—*Chemical News*.



THE PHARMACEUTICAL SOCIETY'S CALENDAR.

The Calendar of the Pharmaceutical Society of Great Britain, 1867-68. Printed for the Society, 17, Bloomsbury Square.

We must congratulate the Council of the Pharmaceutical Society on the satisfactory result of their wise decision to bring together, in a form convenient for reference, the scattered documents that explain the organisation and functions of the Society. At the present time, when the chemists and druggists are hopefully looking forward to the manifest advantages of an extension of the system of examination adopted by the Society, there is a general demand for the full and precise information afforded by this official compilation.

The calendar proper, giving the dates of Council meetings, examinations, etc., occupies but little space. It is followed by a complete list of the officers and members of the Society. Then come extracts from the Charter, Pharmacy Act, and Bye-laws, explaining the constitution, government, and objects of the Society; the Regulations of the Board of Examiners, School of Pharmacy, Laboratory, Library, and Museum; the Conditions of Competition for Prizes and Scholarships; the Examination Papers for the past session; and lists of the students who have obtained prizes and certificates of honour and merit from the foundation of the Society. The next section contains the rules of the Benevolent Fund, and a list of the donations and subscriptions to this admirable institution.

Two useful Appendices are given. The first contains tables of fees; a statement of the privileges of Associates and Apprentices, and hints to Students preparing to pass the examination, with lists of the books suitable for study. Appendix B, which many will regard as the most valuable section of the work, is devoted to remarks upon, and extracts from, the Acts of Parliament that affect Pharmaceutical practice, such as the Medicine Stamp and Licence Acts; the Methylated Spirit Act, and the various Acts to amend the laws relating to the Inland Revenue; the Merchant Shipping Acts; the Adulteration of Food Act; the Petroleum Act; and the Arsenic Act.

The general account of the Pharmaceutical Society which forms an introduction to the extracts from official documents is so clear and concise, and so well calculated to remove prevalent misconceptions, that we offer no apology for reprinting it without abridgment:—

"The Pharmaceutical Society was established in 1841, 'for the purpose of advancing Chemistry and Pharmacy, and promoting a uniform system of education of those who should practise the same, and also for the protection of those who carry on the business of chemists and druggists;' and 'to provide a Fund for the relief of the distressed Members and Associates of the Society, and of their widows and orphans.' The original members or founders of this Society consisted of those chemists and druggists in the metropolis and provincial towns who, feeling interested in its objects, volunteered their co-operation; it was of course necessary to make allowance for the then existing race of chemists and druggists, to avoid unjust interference with vested interests, and to form a basis for future operations by the immediate enrolment of such men. At the same time, it was a fundamental principle of the Society that the passing of an examination should eventually be an imperative condition of membership, and the influence of the Society was therefore chiefly directed to the improvement of the rising generation.

"After the incorporation of the Society by Royal Charter in 1843 a bye-law was passed, requiring all persons, except those who were in business on their own account before the date of the charter, to pass an examination prior to admission, and fixing a date after which even this exemption should not be granted.

"The subjects of examination were to be—as they now are—Chemistry, Pharmacy, Materia Medica, and Botany, with the practical manipulations of the laboratory and dispensing counter; also the modes of ascertaining the strength and purity of drugs, the tests and antidotes for

poisons, the doses of ordinary medicines, and an acquaintance with the language of prescriptions.

"These qualifications were all made more imperative by the Pharmacy Act, in the preamble of which we find that, 'whereas it is expedient to prevent ignorant and incompetent persons from assuming the title of, or pretending to be, pharmaceutical chemists or pharmacutists in Great Britain, or members of the said Pharmaceutical Society, to that end it is desirable that all persons before assuming such title should be duly examined as to their skill and knowledge by competent persons, and that a register should be kept of all such persons.'

"The 12th clause of the Pharmacy Act renders it penal for any person not duly registered to assume or use these titles, and the 8th and 9th clauses authorize the appointment of two Boards of Examiners by this Society (one for England and Wales, the other for Scotland), who shall have power to examine such candidates as may present themselves, and grant certificates of qualification.

"The Society consists of three grades—Members, Associates, and Registered Apprentices. The first must be men in business on their own account, or superintendents engaged in the confidential management of the business of others; they must have passed the Major Examination, which includes Prescriptions and Posology, Botany, Materia Medica, Pharmacy, Chemistry, and Practical Dispensing.

"The second—Associates—must have undergone the Minor Examination, consisting of the same subjects less stringently enforced, but sufficiently to test the ability of the Candidates to undertake the duties of Assistants.

"The third—Registered Apprentices—are required to have passed the 'Classical Examination,' proving such an amount of preliminary education in English, Latin, and Arithmetic, as will enable them to enter on their special professional studies with a fair chance of success.

"There are also Honorary and Corresponding Members, elected by the Council, as men who have distinguished themselves in the various branches of knowledge embraced in the educational objects of the Society.

"These are the persons in actual connection with the Society; but there is another and very important class arising from, although not really belonging to it, consisting of men who have passed the various ordained examinations, and been registered under the Act as 'Pharmaceutical Chemists,' but have not, on attaining that position, entered into membership.

"It has been the great object of the Society from its commencement to stimulate the education of dispensing chemists, and the fund formed by the subscriptions of Members, Associates, and Apprentices has furnished the means of doing this; but membership is a voluntary matter, and although each new subscriber is a source of strength to extend the advantages of the Association, yet these educated men, whether becoming members or not, may be regarded as the actual fruit of the Society.

"The Pharmacy Act does not interfere with the sale of drugs or the dispensing of prescriptions by incompetent persons, but it establishes a distinction between such persons and those who possess a legal title and qualification, thus giving the public a means of safety in a most important matter of every-day life.

"The objects of association being, as already stated, the advancement of pharmaceutical knowledge, the first efforts were addressed to the formation of a Library, and partly by donations, partly by purchase, it now contains upwards of 3,000 volumes of valuable works, which are at the command of Members, Associates, and Apprentices for perusal in the house of the Society (where the librarian is in daily attendance between the hours of 9 A.M. and 6 P.M.), or for circulation under proper rules.

"A museum also has grown from small beginnings to the most important collection of objects of pharmaceutical and chemical interest in England, and by its perfect arrangement and classification affords most valuable assistance to students.

"But the point on which the Society has expended most time and money has always been *Pharmaceutical education in the common acceptation of the term*. It was never proposed that attendance on any particular School should be required of the Candidates for examination; the possession of the necessary knowledge, no matter how obtained, was held to be sufficient; but twenty years ago there was no public

School of Pharmacy, and the ordinary opportunities of apprenticeship, however much they may have been improved since, were then utterly insufficient to prepare a student for the required examination. To supply this great want, a system of lectures was at once established, and Dr. Anthony Todd Thomson, Dr. Pereira, and Professor Fownes (names now enshrined in the roll of departed celebrities), together with Dr. Redwood, the present Professor of Chemistry, were engaged to deliver them. Such lectures continue to the present day, Professor Bentley having succeeded to the chairs formerly occupied by Drs. Thomson and Pereira.

"A Laboratory was formed in the basement of the Society's house, and a school of practical pharmacy opened. The old pupils of this school are scattered far and wide throughout the kingdom, leavening the mass. That Laboratory, being confined in accommodation, and objectionable from its situation, has been exchanged for one in all respects perfect, and fitted for the reception of a large class; it contains separate benches for sixty students, fitted with all appliances of gas, water, and needful apparatus; and by its position at the top of the house, and ample provision of gas-chambers and flues, it is altogether unobjectionable both to those who work in it and to the other members of the establishment.

"This Laboratory is now under the superintendence of Dr. Attfield, assisted by Mr. Tilden—both of them former pupils of Dr. Redwood, and well qualified for the duties of their office. The subjects pursued therein are mainly pharmaceutical, although opportunities are given for those who desire to devote their attention to pure chemistry, and to place the Laboratory within more easy reach of Assistants and Apprentices who may be unable to devote their whole time to study for a certain season, the option of attending on particular days of the week, or at stated times of the day only, has been granted by the Council. It will be obvious that chemistry, in its relation to pharmacy, is the legitimate study to be encouraged, and accordingly the chemical processes of the Pharmacopœia occupy much of the time of the student.

"As stimulants to exertion on the part of the students, prizes and certificates of merit are awarded at the end of each session on the report of the Professors. Associates who have passed the Minor Examination in honours are entitled to compete for a prize of books given annually at the end of the session; and in like manner the higher distinction of the Pereira Medal is open for competition to Pharmaceutical Chemists (being connected with the Society) who, in passing the Major Examination, have been placed on the list of honours by the Board of Examiners. This latter prize is provided from a fund raised on the death of the distinguished Professor of Materia Medica, and ultimately placed in the hands of the Council, to be applied by them in encouraging researches or proficiency in his particular department by Associates, Apprentices, or Students of the Pharmaceutical Society.

"There is a name connected with this Society to which, above all others, honour is due,—that of Jacob Bell. To his energy and perseverance it is mainly attributable that in 1841, when chemists and druggists, taking alarm at some threatened interference with their rights and privileges, came together to protect themselves, an interest was aroused on behalf of education strong enough to overcome their old trade jealousies, to furnish a basis of common action among them, and act as a passport to the Legislature when urging their plea for incorporation; and in remembrance of his labours, increasing year by year up to the time of his death, and then supplemented by the munificent bequest of £2,000, 'to be expended in establishing or otherwise increasing the efficiency of a School of Pharmacy, or in promoting Pharmaceutical Education in such manner as the Council may deem expedient,' the Society established, and endowed by subscription (to which many medical and other friends contributed) two scholarships, to be called the 'Jacob Bell Memorial Scholarships,' one open to Associates under twenty-four years of age who have passed the Major Examination, the other to Associates and Apprentices or Students under twenty-one years of age.

"The endowment of each scholarship is £30 per annum, and to this the Council has hitherto added a grant of free laboratory instruction.

"Evening meetings are held at the house of the Society

on the first Wednesdays in the months of October, November, December, January, February, March, and April, for the purpose of reading papers and eliciting discussions on pharmaceutical subjects; such gatherings tend greatly to break down the restraint too common amongst men of one calling, and cause an interchange of opinions and experiences from which all derive benefit.

"As a means of intercommunication, the *Pharmaceutical Journal* has, from the commencement of the Society, occupied a most important place. It is distributed to every Member, Associate, and Apprentice immediately on its publication, monthly, and has beyond that a considerable circulation amongst medical men and others interested in pharmacy. Since its first issue by Mr. Bell it has contained from month to month the Transactions of the Society, and a vast deal of correspondence and information on various subjects either of scientific or commercial interest to the body generally, as well as constant notices on such questions as might be said to affect pharmaceutical chemists politically. This Journal has carried to men out of the Society such information regarding its constitution and progress as has enabled them to form a more just estimate of its value and honest efforts to promote the general good, and has established Pharmacy in its rightful position, as an important science in connection with medicine.

"The copyright of this Journal was presented by Mr. Bell to the Pharmaceutical Society immediately before his death, and the work has since been conducted by a committee of editors from time to time appointed by the Council.

"The intention expressed in the Charter of Incorporation to establish a Benevolent Fund for the relief of distressed Members and Associates, their widows and orphans, has been carried into effect; subscriptions and donations, together with certain sums voted from the general fund of the Society, have been invested as a separate fund specially applicable to this purpose, and that fund is now sufficiently large to provide annuities for aged Members and widows, as well as to give casual relief where needed.

"The interest of the Pharmaceutical Society in the provinces is watched over by Local Secretaries, appointed by the Council on the recommendation of members residing in the districts for which such Secretaries are to act; and these gentlemen are of great importance when it is necessary to obtain information or rouse the whole body to action. Such occasions have occurred repeatedly; and when in 1862 a Bill was introduced into Parliament for the purpose of amending the old Juries Act, the united efforts of the Society obtained the exemption of pharmaceutical chemists from service on juries by an addition to that Bill."

SQUIRE'S COMPANION TO THE PHARMACOPŒIA.

Companion to the New Edition of the British Pharmacopœia, 1867, comparing the strength of the various Preparations with those of the London, Edinburgh, and Dublin, United States, and other Foreign Pharmacopœias. With Practical Hints on Prescribing. By PETER SQUIRE, F.L.S., etc. Fifth Edition. London: John Churchill and Sons. Pp. xx., 318.

The fifth edition of Mr. Squire's "Companion" is virtually a new work, as it has been recast throughout and adapted to our new Pharmacopœia. It retains all the admirable characteristics of former editions, and is distinguished by many new evidences of conscientious and discriminating labour. It is unquestionably the fullest and most practical expositor of the Pharmacopœia that has yet appeared, and every chemist and druggist should take care to have it within reach. Though it may be turned to good account by students of pharmacy, its merits are those which specially concern busy practitioners at the dispensing counter, in the consulting-room, or in the manufacturing laboratory. It is a collection of plain formulæ, practical observations, and concise descriptions, arranged in the most obvious manner. The simple drugs and chemicals constituting our official *Materia Medica* are noticed in alphabetical order, and their pharmaceutical preparations are described under sub-heads, also arranged alphabetically. Thus under the head CAMPHORA we have a full account of the simple drug, and then notices of the official preparations, AQUA LINI-MENTUM, LINIMENTUM COMPOSITUM, SPIRITUS, and TINCTURA CAMPHORÆ COMPOSITA. The preparations are compared

with those of the older Pharmacopœias of the United Kingdom, and with those of the principal foreign Pharmacopœias.

In addition to the preparations of the pharmacopœias, Mr. Squire notices numerous preparations that are "not official." Thus, in connection with Camphor we get formulæ for Camphor balls, Camphora cum Creta, Ceratum and Essentia. The fact that numerous non-official formulæ have been added to the work will doubtless induce many of our readers to purchase the new edition. We will pick out a few of these plums:

Arsenical Paste for Dentists.—Arsenious acid, 2; sulphate of morphia, 1; croasote to make a stiff paste. A quantity of the size of a pin's head is ample for one application. It should be spread on cotton-wool and placed in the tooth. It will thus destroy the sensibility of a carious tooth, and in a few minutes the tooth is ready for stopping.

Arnica Opodeldoc.—White soap, 4; rectified spirit, 10; tincture of arnica, 5; camphor, 1. Dissolve by heat and strain.

Camphor Balls.—Camphor, 2; white-wax, 5; spermaceti, 3; oil of almonds, 3; tincture of tolu, 4. Melt and pour into half-ounce gallipots.

Linimentum Capsici.—Capsicum, 1; rectified spirit, 3. Macerate seven days and strain. Used externally for swollen chilblains and as a counter-irritant, but not when the skin is broken. For chilblains, saturate a piece of sponge or flannel with the tincture, and rub the chilblain well until a strong tingling is produced. Continue daily until recovery. A small dossil of lint or cotton dipped into the tincture is an excellent remedy for toothache.

Liquor Chloroformi Compositus.—Chloroform, 4 oz.; ether, 1 oz.; rectified spirit, 4 oz.; treacle, 4 oz.; extract of liquorice, 2½ oz.; muriate of morphia, 8 grs.; oil of peppermint, 16 minims; syrup, 17½ oz.; prussic acid (2 per cent.) 2 oz. Dissolve the muriate of morphia and the oil of peppermint in the rectified spirit; mix the chloroform and the ether with this solution; dissolve the extract of liquorice in the syrup, and add the treacle; shake these two solutions together and add the prussic acid. This has been represented to the author as the composition of the popular medicine called *Chlorodyne*, and he has published it in order that those who object to prescribe proprietary medicines may be able to prescribe a compound under the above name with a knowledge of its composition.

In the formula for "*Chlorodyne*," previously published by Mr. Squire, no ether was ordered.

Though we find so much to admire in Mr. Squire's book, we cannot overlook certain blemishes. The tables giving the equivalents of French and English weights on page 16 betray inexcusable carelessness. The numbers representing grains in the second table are all wrong, and many of the numbers in the first table are obviously incorrect. Again, the relations between English and Foreign preparations are not always expressed with precision. Indeed, we have reasons for believing that Mr. Squire has not revised his work with the French Codex of 1866. But the most glaring blemishes are those which take the form of advertisements. Mr. Squire ought to forget the shop when he is addressing the medical profession and his brother pharmacutists. He should abstain from publishing anything that might be looked upon as a bait to attract customers to 277, Oxford-street. We do not require to be informed in a standard work on practical pharmacy that atropine paper and atropine gelatino are prepared by the Author (p. 44); that the Author has agreed to import the syrup of phosphate of iron made by Mr. Parrish, and to be his sole agent for Great Britain (p. 117); or that Boudault's Pepsine was introduced into Britain by the Author in 1855, and has ever since kept its place amongst the valuable therapeutical remedies for indigestion (p. 182). We could cite other instances of Mr. Squire's desire to push trade. We trust, however, that the next edition of this excellent book will be free from these blemishes.

NEW PUBLICATIONS.

Messrs. Churchill and Sons announce a manual for students entitled "*First Principles of Modern Chemistry*," by W. J. Kay Shuttleworth. Mr. Murray announces a new work by Mrs. Somerville "*On Molecular and Microscopic Science*," a new work by Darwin "*On the Variation of Animals and Plants under Domestication*," and new editions of Lyell's "*Principles of Geology*," and Murchison's "*Siluria*."



LONDON, NOVEMBER 15, 1867.

NOTICE TO SUBSCRIBERS AND ADVERTISERS.

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The CHEMIST AND DRUGGIST is published on the Fifteenth of every month, except when that date falls upon a Sunday, when it is published on the preceding day. It is regularly supplied direct to the Members of the Trade in Great Britain, Ireland, the Colonies, and all the principal seats of foreign commerce.

Everything intended for insertion in the current Month must be sent in before the 10th, except Employers' and Assistants' Advertisements which will be received until 9 A.M. on the morning previous to publication.

EDITORIAL NOTE.

WE have received numerous letters in answer to our appeal for counsel, in addition to those which we print in another column. Most of them urge us to carry on the journal under its present form, and most of them advocate the continued publication of the Price Current. In our next we shall fully explain our plans for the coming year, which will, we believe, give satisfaction to the great majority of our subscribers. Meanwhile we shall thankfully receive any practical suggestions for increasing the value of the journal.

THE CODEX.*

VIII.

CHEMISTRY OF THE CODEX.

BY JOHN CARGILL BROUGH, F.C.S.

ALTHOUGH the new edition of the French Codex is impressed with the great names of DUMAS and WURTZ, it does not reflect the present phase of chemical science. The processes prescribed might often be greatly simplified and improved, or profitably displaced by others; the nomenclature sanctioned is unsystematic and confusing; and the notation adopted belongs to the chemistry of the past. We do not expect to find perfect harmony between the latest doctrines of theoretical chemists and the practical teachings of a Pharmacopœia, but we may reasonably look for some evidences of an attempt to avoid unnecessary discord. There are no signs of such an attempt in the Codex, and the pharmacutists of France, the birthplace of modern chemistry, must still square their science with discarded theories. Yet in spite of its defects the chemistry of the Codex has many admirable characteristics. The directions given for pre-

paring the various compounds used in medicine are remarkably precise and plain. The apparatus and instruments required are most minutely described, and every detail of manipulation is fully explained. In fine, though the Codex evinces the conservatism of the scientific men of France, and the inertia of her great academies, it is a thoroughly practical work, which may be advantageously studied by the pharmacutists of all countries.

We trust that our analysis of the chemical sections of the Codex will retain something of the practical character of the work. We shall point out the chief differences between the preparations prescribed, and the corresponding preparations of the new British Pharmacopœia, and reproduce in a condensed shape the formula for every chemical substance that is peculiar to the Codex.

The articles distinguished by asterisks are those which, according to the Codex, ought to be found in every French pharmacy.

CORPS SIMPLES—SIMPLE BODIES.

Oxygène gazeux (Gaz oxygenium).—Oxygen gas obtained from chlorate of potassium by heating the salt in a small glass flask to which is adapted a bent glass delivery-tube. The liberated gas is collected by the displacement of water in suitable bottles inverted upon the shelf of a pneumatic trough. The bottles when filled are corked under water, and the gas is preserved for use by keeping the necks of the bottles immersed in water. According to the Codex 10 grammes (154 grains) of chlorate yield a little more than two litres and a half of oxygen (nearly four pints and a half). Theoretically, 10 grammes of the salt should furnish 2.869 litres (5 pints) of the gas measured at the ordinary temperature and under the ordinary atmospheric pressure. The inhalation of oxygen is occasionally prescribed by English Physicians.

**Fleur de Soufre lavée* (Sulfur sublimatum et lotum).—Washed flowers of sulphur. A small quantity of pure water is mixed with the sublimed sulphur of commerce, and the resulting soft paste is treated with boiling water. When the sulphur has subsided, the supernatant liquid is decanted and replaced by fresh boiling water. The washing by affusion and decantation is continued until the wash-water ceases to reddens litmus-paper, when the sulphur is thrown on a cloth to drain and dry. The coarser particles of the product are removed by means of a silken sieve. This washed sulphur is the representative of Sulphur sublimatum, British Pharmacopœia.

Soufre précipité (Magistère de Soufre; Sulfur præcipitatum).—This is our officinal Sulphur præcipitatum. The Codex and British Pharmacopœia formulae for its preparation are virtually the same, though the relative proportions of sulphur and slaked lime prescribed for making the mixed polysulphide and hyposulphite of calcium differ considerably. In the French formula the quantity of slaked lime ordered is three times as great as that of the sulphur, and far exceeds the quantity required for the reaction, consequently there must be an inconvenient proportion of insoluble matter to remove by filtration.

Chlore dissous (Solution aqueuse de Chlore; Chlorum aquæ solutum).—An aqueous solution of chlorine corresponding to Liquor Chlori, British Pharmacopœia. The strengths of the two preparations do not exactly accord, but the difference is so slight that it may be disregarded. The trifling excess of chlorine in the French solution is due to a provision for keeping the water which absorbs the gas at the low temperature of 8° C. (46.4 F.). The apparatus ordered in the Codex process is far preferable to the rough and ready contrivance indicated in the British Pharmacopœia directions, but it is not always within the reach of the practical pharmacist. A bent tube-funnel is employed for introducing the acid into the gas bottle, a series of Woulff's bottles for containing the water to be saturated, and a test-glass filled with milk of lime for absorbing the waste gas issuing from the last bottle.

Fumigation Guytonienne (Fumigation de Chlore; Suffumigatio Guytoniana).—This is simply chlorine gas prepared by the reaction of chloride of sodium, black oxide of man-

* Continued from page 112.

ganese, and sulphuric acid. The quantities prescribed for the fumigation of an apartment having the capacity of about 100 cubic metres (3532 cubic feet) are powdered salt 250 grammes (say 9 oz.), peroxide of manganese 100 grammes (3½ oz.), sulphuric acid 200 grammes (4 fl. oz.), and common water 200 grammes (7 fl. oz.). These quantities must of course be augmented or diminished, according to the size of the room. The salt and manganese having been mixed together, are placed in a capsule of glass or earthenware, the water is added, and finally the sulphuric acid is poured into the mixture, which soon begins to evolve suffocating fumes of a greenish-yellow colour. The room should be uninhabited and kept well closed for at least half an hour.

Charbon végétal (Carbo e Ligno).—The wood charcoal of French pharmacy is a much more refined product than our Carbo Ligni, as it is specially prepared by heating fragments of white wood, light and non-resinous, in a covered earthen crucible, until a test-sample ceases to colour a boiling solution of caustic potash. To exclude air from the crucible, the spaces between the fragments of wood are filled up with ordinary charcoal dust, and a bed of the same material is formed above the fragments. When the carbonisation of the wood has been satisfactorily accomplished, the base charcoal dust adhering to the pieces is carefully removed by the aid of a soft brush.

Argent purifié (Argentum repurgatum).—Refined silver, Argentum purificatum, British Pharmacopœia. The Codex gives precise directions for obtaining the pure metal from the alloyed silver of coin or plate, but as silver-refining involves the use of a proper metallurgical furnace, few pharmacæutists can profit by them. The alloyed silver is dissolved in weak nitric acid by the aid of heat, and the resulting solution, after dilution with a large quantity of water, is treated with an excess of hydrochloric acid, which precipitates the silver as chloride. This chloride, washed and dried, is mixed with half its weight of anhydrous carbonate of sodium and reduced to the metallic state by the heat of a reverberatory furnace. The pure silver thus obtained is remelted in a new crucible and granulated by pouring it into water.

* *Limaille de Fer préparée* (Limatura Ferri præparata).—Prepared iron-filings. A coarse powder of uniform grain produced by rubbing or cutting soft iron with a bastard file (*lime à main bâtarde*). It should be completely soluble in hydrochloric acid, and should consist of perfectly bright particles that are readily attracted by the magnet. It is the representative of Ferrum, British Pharmacopœia, which is simply wrought iron in the form of wire or nails.

* *Limaille de Fer porphyrisée* (Limatura Ferri supra porphyriten lævigata).—A very fine powder of iron, almost destitute of metallic lustre, obtained by triturating successive small portions of the coarse filings in a dry condition.

* *Fer réduit par l'Hydrogène* (Ferrum opo hydrogenii paratum).—Ferrum redactum, British Pharmacopœia. The British and French processes for preparing reduced iron are essentially the same, but they differ in some noteworthy particulars. Taking the Codex as a guide, the operator would send a current of hydrogen through the cold tube, and when he was satisfied that the atmospheric air was completely expelled, he would gradually heat the tube to the temperature of *dull redness*. But if he followed the directions of the British Pharmacopœia, he would begin by raising the tube to a *strong red heat*, and would then cause it to be traversed by the stream of hydrogen. The expulsion of air before heating the tube in the French process seems to be a good precautionary measure, as a mixture of atmospheric air and hydrogen explodes at a red heat. With regard to temperature, the “dull redness” of the Codex (*température du rouge obscur*), is doubtless preferable to the “strong red heat” of the British Pharmacopœia. Upon this subject, which is dismissed with one vague phrase in our own Pharmacopœia, the Codex is very explicit. “It is essential,” we read, “that the temperature should be carefully regulated; if the reduction take place below that of dull redness, the product will be black and pyrophoric; if it be effected at that of bright redness, the particles of iron will agglutinate, and the product will not have the degree of fineness and division which it ought to have for medicinal use.” These observations accord with the precautions given by Mr. H. N. Draper in his monograph on Iron Prepara-

tions. (a) The Codex states, moreover, that the hydrogen employed should be absolutely free from sulphuretted hydrogen and sulphurous acid, as the sulphur in these products would combine with the iron to form sulphide. To remove these common impurities of hydrogen Mr. Draper recommends the plan of the United States Pharmacopœia, which consists in passing the gas through acetate of lead solution and milk of lime. The hydrogen of the British Pharmacopœia process is dried but not purified, and as it is made from sulphuric acid, and the zinc of commerce, it may be expected to contain a troublesome proportion of sulphuretted hydrogen.

Limaille d'Étain (Limatura Stanni).—Coarse filings of pure tin.

Poudre d'Étain (Pulvis Stanni).—Powder of tin.—Pure tin is melted in an iron ladle, thrown into a hot mortar, and triturated until it solidifies. A portion of the tin is thus obtained in a state of fine division, and is separated by means of a silken sieve. The residue is remelted and treated as before.

Bismuth purifié (Bismuthum repurgatum).—Bismuthum purificatum, British Pharmacopœia. The bismuth of commerce is fused twice with nitrate of potassium, as in the British process. The quantity of nitrate prescribed in the Codex is one-tenth that of the bismuth, just half the proportion ordered in the British Pharmacopœia. “The bismuth thus obtained,” says the Codex, “is not chemically pure; but it contains no arsenic, and may be employed for the different pharmacæutic preparations of which it is the base.”

Antimoine purifié (Stibium repurgatum).—Purified metallic antimony. The imperfect process of purification given under this head is probably a relic of the metallurgy of Basilus Valentinus. Antimony of commerce, reduced to a fine powder, is gradually heated in a shallow dish of glazed earthenware, until black spots begin to appear in the mass, when the heat of the furnace is diminished. The spots spread, and, after a while, the whole mass becomes incandescent, in spite of the diminution of temperature. The product of this roasting operation is oxidised antimony, having, according to the Codex, the composition of a definite suboxide (12.5 oxygen, to 100 antimony). This product is then fused in a covered crucible at the lowest temperature possible, and on breaking the crucible when cold, a lump of metallic antimony is discovered, together with crystalline impure trioxide. The amount of purified antimony obtained by this process is only about a quarter of the weight of the crude metal originally taken.

Mercur purifié (Hydrargyrum purificatum).—This is the mercury of commerce from which foreign metals have been removed by the action of weak nitric acid. The mercury and acid are placed in a large flask, and allowed to remain in contact for twenty-four hours, being frequently agitated. The supernatant liquid is then decanted, and the mercury is washed with plenty of water and carefully dried. The quantities in the Codex formula are—mercury, 2 kilogrammes (about 70 oz.); nitric acid of 1.42, 20 grammes (4 fl. drms.), previously diluted with twice its volume of water.

ACIDES MINÉRAUX—MINERAL ACIDS.

* *Acide sulfurique purifié* (Acidum sulfuricum purum).—Sulphuric acid of 1.843, corresponding to Acidum sulphuricum, British Pharmacopœia. The oil of vitriol of commerce is purified by distillation, a glass retort being employed. To diminish the percussive ebullition, which is such a dangerous characteristic of the distillation of oil of vitriol, some spirals of platinum wire or angular fragments of flint are put into the retort, and the latter is heated by burning charcoal placed on an annular grating encompassing its body. The first part of the distillate, about one-tenth of the oil of vitriol taken, is rejected as impure, and a new receiver having been adapted to the retort, the distillation is allowed to proceed until the pure acid collected equals about two-thirds of the liquid operated upon. Should the acid of commerce contain nitrous or nitric acid (hyponitric acid according to the Codex), it must be subjected to a preliminary process of purification, which consists in heating it in a flask with a little crystallised sulphate of ammonia. The presence of nitrogen acids is indicated by a reddish colouration on adding

(a) *Manual of the Medicinal Preparations of Iron*. By HARRY NAPIER DRAPER, F.C.S. Dublin: Faunin and Co.

to the oil of vitriol a minute quantity of sulphate of iron in powder.

**Acide sulfurique diluë* (Acidum sulfuricum dilutum).—Prepared by gradually adding 1 part by weight of sulphuric acid to 9 parts of distilled water. It contains 8.16 per cent. of anhydrous sulphuric acid, and is, therefore, weaker than Acidum sulphuricum dilutum, British Pharmacopœia, which contains 11.14 per cent.(b)

**Acide Nitrique officinal* (Acidum nitricum officinale).—Nitric acid of 1.42 corresponding to Acidum nitricum, British Pharmacopœia. Its preparation is described at great length in the French work. Equal weights of powdered potassic nitrate and sulphuric acid are introduced into a plain glass retort, without soiling the interior of the neck, and distilled at a gentle heat, augmented towards the end of the operation. The product, which is condensed in a glass receiver, is impure nitric acid of sp. gr. 1.50, amounting to 65 per cent. by weight of the quantity of sulphuric acid taken. This is reduced to the official strength by the addition of distilled water (113 grammes to 650 grammes in the Codex formula, corresponding to 17.4 to 100 parts by weight, or 26 to 100 by measure). According to our French guide, the acid thus prepared invariably contains minute quantities of chlorine, sulphuric acid, and nitrous products, which have to be removed by a series of chemical operations. Nitrate of silver is added, drop by drop, to the impure acid, until it ceases to produce a precipitate. When the chloride of silver has subsided, the clear liquid is decanted and distilled at a gentle heat, with the addition of nitrate of barium, which fixes the sulphuric acid; and, finally, the acid is freed from nitrous products, by distilling it with the addition of a small proportion (1 or 2 per cent.) of bichromate of potassium. The purity of the official acid might have been insured by much simpler means. If the original product of the reaction of the sulphuric acid and nitre had been redistilled off a little fresh nitre, to hold back the sulphuric acid, and if the first portions of the distillate, containing the chlorine and peroxide of nitrogen had been rejected, the acid obtained would have required no further treatment beyond simple dilution. To prepare nitric acid of sp. gr. 1.52 (*acide nitrique monohydraté*), the impure acid of 1.50 obtained in the first operation is heated in a retort with an equal volume of sulphuric acid, and the vapour given off condensed in a receiver, kept cool by a stream of water. The distillation is stopped when the volume of acid recovered equals one-quarter of the total volume of liquid taken. This strong acid is not chemically pure, and is only prescribed as a caustic.

Acide Phosphorique officinal (Acidum phosphoricum officinale).—This is a strong aqueous solution of phosphoric acid obtained by the action of nitric acid on phosphorus, as in the British Pharmacopœia process for Acidum phosphoricum dilutum. After evaporating the product to the consistence of a thick syrup in a platinum capsule, enough water is added to bring it to the sp. gr. 1.45. According to Mr. John Watts,(c) this specific gravity indicates a solution containing about 45 per cent. of the anhydrous acid. Our own diluted acid contains only 10 per cent.

**Acide Borique cristallisé* (Acidum boricum crystallisatum).—This corresponds to the boracic acid of the British Pharmacopœia appendix. The Codex gives a formula for its preparation. Crystallised borax (300 grammes) is dissolved in distilled water (600 grammes) by the aid of heat; the white of an egg mixed with distilled water (300 grammes) is added, and the whole raised to ebullition; sulphuric acid (100 grammes) diluted with distilled water (300 grammes) is then poured in, and the solution, after filtration, is set aside in a cool place to crystallise. The product is a crystalline mass of boracic acid, which must be drained, washed with distilled water, and dried upon folds of absorbent paper.

**Acide Chlorhydrique dissous* (Solution aqueuse d'acide chlorhydrique; Acidum chlorhydricum aqua solutum).—Acidum hydrochloricum, British Pharmacopœia. The French and British processes are essentially the same, and the products may, for all practical purposes, be taken as pharmaceutical equivalents. The specific gravity of the Codex solution is given as 1.17, while that of the British Pharmacopœia solution is given as 1.16, but the difference between these

numbers does not imply a greater difference in strength than about 2 per cent. of acid.

Eau Régale (Acide nitro-muriatique; aqua regalis).—Aqua regia prepared by mixing nitric acid of sp. gr. 1.32 with thrice its weight of hydrochloric acid of 1.17 in a bottle, which must be left unstopped for some days, and shielded from the light. (Nitric acid of 1.32 may be obtained by diluting the official acid of 1.42 with one-third of its weight of distilled water.) The only representative of *cau régale* in the British Pharmacopœia is Acidum nitrohydrochloricum dilutum. The relative proportions of acids and water in the two preparations are here given:—

	Offic. nitric acid.	Offic. hydrochl. acid.	Water.
Eau Régale, Codex	18.75	75.00	6.25
Acid. Nitrohydrochlor. dil., British Pharmacopœia . . .	12.57	13.68	73.75

Acide Sulfhydrique dissous (Solution aqueuse d'acide sulfhydrique; acidum sulfhydricum aqua solutum).—An aqueous solution of sulphuretted hydrogen. The gas is obtained by the reaction of hydrochloric acid and sulphide of antimony, promoted by a gentle heat, and passed into distilled water that has been boiled, and allowed to cool out of contact with the air. The apparatus required consists of a generating flask, a series of Woulff's bottles for containing the water to be saturated, and a test-glass filled with milk of lime for absorbing the undissolved gas. According to the Codex, 50 grammes of sulphide of antimony (say 1½ oz.) with 200 grammes of hydrochloric acid (say 6 fl. oz.), yield sufficient gas to saturate about 3 litres of water (over 5 pints). The solution is limpid and has a fœtid odour, recalling that of rotten eggs. Exposed to the air, it absorbs oxygen, deposits sulphur, and loses its characteristic odour.

**Acide Prussique Médicinal* (Acidum cyanhydricum aqua solutum).—Hydrocyanic acid dissolved in water, and constituting ten per cent. by weight of the solution. One part by weight of this solution is equivalent to five parts by weight of Acidum hydrocyanicum dilutum, British Pharmacopœia. The preparation of the French medicinal prussic acid—or as it is sometimes called, *l'acide cyanhydrique au dixième*—is attended with considerable danger, and we must refer our readers to the pages of the Codex for the important manipulative details of the prescribed process. In the first stage of this process, the vapour of aqueous hydrocyanic acid, produced by heating a mixture of mercuric cyanide and chloride of ammonium with aqueous hydrochloric acid, is passed over fused chloride of calcium, which abstracts the water, and the anhydrous acid thus obtained condenses in a receiver, surrounded by a freezing mixture. In the second stage of the process, the anhydrous acid is transferred to a tared bottle of black glass, and diluted with nine times its weight of distilled water. All this seems simple enough, but when we remind our readers that the anhydrous acid carries death in a single drop, and in a very small volume of vapour, it is hardly necessary to state that the process involves many practical difficulties. The reaction which gives hydrocyanic acid in the first operation is an ordinary case of double decomposition. The chlorine of the chloride of hydrogen, or hydrochloric acid, and the cyanogen of the cyanide of mercury change places, and we get chloride of mercury and cyanide of hydrogen, or hydrocyanic acid. The chloride of ammonium does not take part in the primary reaction, but it combines with the chloride of mercury to form the double salt, known as “sal alembroth,” which remains in the retort.

Acide Carbonique dissous (Solution aqueuse d'acide carbonique; acidum carbonicum aqua solutum).—Carbonic acid gas dissolved in water. The gas is generated by pouring weak hydrochloric acid on fragments of white marble, and passed through a series of Woulff's bottles containing the water. At ordinary temperatures water dissolves about its own volume of the gas.

**Solution officinale d'Acide Chromique* (Acidum chromicum aqua solutum).—This solution, which is much used in French hospitals as a caustic, is prepared by dissolving crystallised chromic acid in an equal weight of distilled water. The Codex gives precise directions for preparing the crystallised acid or anhydride, which may be thus abridged: Take of crystallised bichromate of potassium, 1 kilogramme (say 35 oz.); common water, 10 kilogrammes (say 17½ pints); sulphuric acid of 1.84, 20 kilogrammes (say 19 pints). Place

(b) By a clerical error, this percentage is given as 10.14 in the British Pharmacopœia.

(c) See Proc. British Pharmaceutical Conference, 1865.

the salt and the water in a glazed pan, heated by a water-bath. When a complete solution is obtained, and while it is still warm, add the sulphuric acid, little by little, stirring all the while with a glass rod. Place the pan in a situation where the temperature is not very low, and allow the mixture to rest for twenty-four hours. At the end of this time, you will find at the bottom of the vessel a bed of needle-shaped crystals of a beautiful crimson colour. Decant the mother liquor, detach the crystals, and place them in a funnel, partially stopped by fragments of glass, to drain. Lastly dry the crystals on a porous brick in a stove at about 35° C. (95° F.) The weight of the dried crystals thus obtained is 620 grammes (nearly 22 oz.).

OXYDES MÉTALLIQUES—METALLIC OXIDES.

Oxyde d'Antimoine cristallisé (Fleurs argentines d'antimoine; oxydum stibicum igne paratum).—Antimonious oxide in shining prismatic crystals, obtained by heating metallic antimony in an open crucible placed in the muffle of a small cupelling furnace. The mouth of the muffle is partially obstructed by a large piece of ignited charcoal. The crystallised oxide is deposited upon the sides of the crucible above the melted metal.

Oxyde d'Antimoine par précipitation (Oxydum stibicum aquâ paratum).—Antimonii Oxidum, British Pharmacopœia. It is prepared according to the directions of the Codex, by boiling oxychloride of antimony (powder of algaroth) in a solution of bicarbonate of potassium.

* *Antimoine diaphoretique lavé* (Superstibias potassicus).—An acid antimoniate of potassium prepared by fusing purified metallic antimony with twice its weight of nitrate of potassium, and washing the resulting compound, finely powdered, with a large quantity of water. It is a perfectly white powder, and according to the Codex, is composed of antimonious acid, 76.99; potassic oxide, 10.70; and water, 12.31 per cent.

Acide Antimonique hydraté (Acidum stibicum cum aquâ).—This is obtained as a precipitate by adding sulphuric acid to the wash-water of the preceding process. It is sometimes called *matière perlée de Kérkingius*.

* *Oxyde rouge de Mercure* (Précipité rouge; oxydum hydrargyricum).—Hydrargyri oxidum rubrum, British Pharmacopœia. In the process of the Codex, the whole of the mercury is converted into nitrate, and the oxide is obtained by heating the dried salt. In the more economical process of the British Pharmacopœia, only half the mercury ordered is converted into nitrate, and the remainder is triturated with the dry salt until it is completely deadened. The yellow oxide prepared by precipitating a dissolved mercuric salt with excess of potash is referred to in the Codex as a non-official article, which may be specially prescribed.

Oxyde rouge de Fer (Colethar; oxydum ferricum igne paratum).—Amorphous ferric oxide obtained by the calcination of sulphate of iron.

* *Safran de Mars apéritif* (Oxyde de Fer hydraté; Oxydum ferricum aquâ mediante paratum).—The representative of Ferri peroxidum hydratum, British Pharmacopœia. The process prescribed is similar to that given in the London Pharmacopœia for Ferri sesquioxidum. A solution of carbonate of sodium is added to a solution of sulphate of iron, and the resulting precipitate of hydrated ferrous carbonate is washed, and exposed to the action of the air, until it assumes a reddish brown colour. In France, as in England, this hydrated oxide is often prescribed under the improper name of "carbonate of iron."

* *Peroxyde de Fer hydraté* (Hydras ferricus).—The representative of Ferri peroxidum humidum, British Pharmacopœia. It is prepared by treating a dilute solution of ferric chloride with excess of ammonia, and washing the resulting gelatinous precipitate. In the British Pharmacopœia process, solutions of ferric sulphate and soda are employed. According to the Codex, the product should be preserved under distilled water at a temperature not below 12° C. (53.6° F.). As an antidote to arsenic, it is most efficacious when recently prepared.

Oxyde noir de Fer (Éthiops martial; Oxydum ferroso-ferricum).—The representative of Ferri oxidum magneticum, British Pharmacopœia. It is obtained by exposing a mass of moistened iron filings to the action of the air for two or three days. The mass must be stirred about occasionally, and water added to replace that lost by evaporation. The product having been triturated in an iron mortar, is washed

through a fine hair sieve, which retains the greater part of the unoxidised iron. The water with the fine oxide suspended in it, after stirring, is then rapidly decanted, the heavier metallic particles being left behind. Finally, the oxide is collected on a fine cloth and dried rapidly between leaves of absorbent paper. In winter the vessel containing the moistened iron filings should be placed in a warm situation. The oxide ought to be quite black, without a trace of red, attractable by the magnet, and entirely soluble without effervescence in hydrochloric acid.

* *Oxyde de Zinc par voie sèche* (Fleurs de zinc; Oxydum zincicum igne paratum).—Oxide of zinc obtained by burning metallic zinc free from arsenic. The metal is placed in a large crucible partially covered and disposed in an inclined position within the furnace. When the temperature is raised to redness the oxide is deposited on the upper part of the crucible in the form of woolly flocks. It is removed as fast as it is formed by the aid of a small iron spoon or other convenient instrument, and is transferred when cool to a stoppered bottle.

Oxyde de Zinc par voie humide (Oxydum zincicum aquâ mediante paratum).—Zinci oxidum, British Pharmacopœia. The French and British formulæ agree.

* *Magnésie calcinée* (Oxydum magnesium).—This corresponds to magnesia levis, British Pharmacopœia, being obtained by the calcination of the light carbonate. As the quantity that may be profitably operated upon occupies a considerable space, the Codex suggests the employment of two very large crucibles placed mouth to mouth, the one upon the other, and bound together by a strong iron wire, a hole for the escape of gas having been previously pierced in the bottom of the upper one. Though the dense oxide (Magnesia, British Pharmacopœia) is not ordered in the Codex, the method of preparing it is incidentally noticed.

Hydrate de Magnésie (Hydras magneticus).—Prepared by mixing calcined magnesia with from 20 to 30 times its weight of distilled water, and heating the mixture until it has boiled for twenty minutes. The powder having been drained on a cloth is dried at the temperature of 50° C. (122° F.). The product is said to contain magnesia and water in the proportion of 31 to 100.

Chaux vive (Oxydum calcicum).—This is the representative of Calx, British Pharmacopœia; but while we in England are satisfied with quicklime obtained from chalk or common limestone, the *chaux vive* recognised in French Pharmacy is the more refined product of the calcination of white statuary marble. Slaked lime (Calcis Hydras, British Pharmacopœia) is incidentally described in the formula for lime water. The French name for it is *chaux éteinte* or *chaux hydratée*.

* *Eau de Chaux* (Oxydum calcicum aquâ solutum).—Liquor Calcis, British Pharmacopœia. The lime water of the Codex is prepared by agitating slaked lime with several portions of distilled water, and decanting the solutions when cleared by repose. The first solution is rejected, and if it is important that the lime water should be quite free from chlorides, the washing by agitation and decantation must be continued until the precipitate, formed on adding nitrate of silver to the solution, is found to be completely soluble in nitric acid.

* *Potasse caustique à la Chaux* (Pierre à cautère; Oxydum potassicum ope calcis paratum).—Impure potassic hydrate corresponding to Potassa caustica, British Pharmacopœia. The first part of the Codex process agrees in all essential particulars with the British formula for Liquor Potassæ; and consists in decomposing potassic carbonate, in dilute solution, with slaked lime. The clear solution of potash is then boiled in a silver basin until the oily fused hydrate is obtained, as in the British process for Potassa caustica. To give the caustic the form in which it is usually employed in France, the fused product must be taken in small portions by the aid of a silver ladle and dropped upon a marble slab, lightly oiled, so that it may solidify in little cakes (*pastilles à la goutte*). The Codex states that the caustic is also employed in the form of pencils, obtained by the use of suitable moulds, and in irregular fragments, obtained by breaking up a mass that has solidified on a plate of tinned copper or silver, lightly oiled. Caustic potash should be kept in bottles perfectly closed by sound corks that have been boiled in wax.

Potasse pure (Potasse à l'alcool; Hydras potassicus).—The

above product purified by Berthollet's plan. The caustic potash reduced to a coarse powder is exposed to the solvent action of an equal weight of rectified spirit, in a closed vessel, the solution of the potash being promoted by frequent agitation. After forty-eight hours the liquid portion is decanted, and the same quantity of spirit is poured upon the residue. This is decanted at the expiration of forty-eight hours, and replaced by a third portion of spirit, which is similarly treated. The united alcoholic solutions having been allowed to repose in a narrow glass vessel perfectly closed, the clear portion is decanted and evaporated to about half its volume in a glass retort, the spirit being recovered by distillation. The concentrated alcoholic solution is then evaporated rapidly in a silver basin, and the scum of carbonaceous matter, produced by the decomposition of the alcohol, is carefully removed. Finally, when the fused hydrate is perfectly limpid and colourless it is poured upon silver plates. The potash thus prepared is free from potassic sulphate, and contains only traces of the chloride and carbonate.

* *Poudre de Vienne* (Pulvis causticus cum calce).—Caustic potash, 5 parts, pulverised in a warm iron mortar, and intimately mixed with slaked lime, 6 parts, previously reduced to a fine powder. The mixture is rapidly transferred to a wide-mouthed bottle fitted with a sound cork that has been boiled in wax. This powder when used is made into a paste with a little rectified spirit, and spread over the part which is to be cauterised.

Soude caustique liquide (Lessive des Savonniers; Oxydum sodicum aquâ solutum).—A solution of sodic hydrate prepared as Liquor Sodæ, British Pharmacopœia, and concentrated by evaporation in a silver basin until its specific gravity, when cold, reaches 1.33, which, according to Tünnermann's table, indicates a solution containing about 30 per cent. of sodic hydrate. The British solution contains only 4.1 per cent. The strong liquor of the Codex must be preserved in bottles closed by corks that have been boiled in wax.

* *Ammoniaque liquide* (Alcali volatil; Solution aqueuse d'ammoniaque; Ammonia aquâ soluta).—An aqueous solution of ammonia, corresponding to Liquor Ammonia fortior, British Pharmacopœia, but somewhat weaker than that preparation. The ammoniacal gas generated by the reaction of 2000 grammes of chloride of ammonium, and an equal weight of slaked lime, is transmitted through a series of three Woulff's bottles, the first one containing a very small quantity of water, sufficient to cover the extremity of the delivery tube, and the second and third 1500 grammes of distilled water each. At the end of the operation the middle bottle will contain, according to the Codex, about 2000 grammes of the *Ammoniaque liquide* having the sp. gr. 0.92. This density, according to the determinations of L. Carus, indicates a solution containing about 21 per cent. of ammonia. The strong and weak solutions of the British Pharmacopœia contain respectively 32.5 and 10 per cent.

(To be concluded in our next.)

PARIS UNIVERSAL EXHIBITION.

(FROM OUR SPECIAL CORRESPONDENT.)

By the time that this article reaches the hands of our readers the Paris Universal Exhibition will have closed its gates to the world, and the matchless collection of natural and artificial treasures which for seven months have been the admiration of some seven or eight millions of visitors, gentle and simple, learned and ignorant, will be in great part on their way back to the localities from whence they came, or better still, they will be on their road to various schools and museums to instruct and delight those whom circumstances have prevented from seeing them in M. Leplay's great gasometer in the *Champ de Mars*.

Passing onwards from Turkey we came to the very interesting display made by the Egyptian Government. Like Turkey, Egypt seems to possess men who understand the real value of Exhibitions to countries that are endeavouring to join with honour and profit in the march of civilization. Cairo has already possessed a pharmaceutical school for several years, under the enlightened direction of Figari Bey, who has studied the science of medicine under the most celebrated European professors, and who seems fully compe-

tent to convey to his own countrymen the precious knowledge that he has acquired. A large number of preparations were exhibited by this gentleman, and by M. Gastinel, the director of the school, most of which appeared to be quite worthy of taking their place by the side of similar substances shown us in the French, German, and English departments. The specimens of opium shown contained a large per centage of morphine, in some samples reaching as high as 10 per cent. In a paper lately read before the French Acclimatization Society, Figari Bey gives some interesting particulars about the cultivation and adulteration of this valuable drug in Egypt. The culture of the opium-yielding poppy succeeds best in Upper Egypt, and specimens from that locality give a higher percentage of active principle than those cultivated elsewhere. The seed is sown broadcast almost immediately after the waters of the Nile have subsided. In from thirty to forty days after, the young plants are pricked out into carefully prepared fields, the soil of which is composed of a light sand, held together by a micaceous clay, and in about two months they begin to bear ripe capsules. In the morning the Egyptian peasant, armed with a sharp knife, makes a series of horizontal and vertical incisions in each poppy head. The juice almost immediately begins to flow in the form of viscous colourless tears, which soon consolidate and become discoloured by the action of the sun and air. Next morning these little masses of virgin opium are carefully removed, the operation being repeated daily until no more is to be obtained. The yield of each morning's operation is kneaded into balls and enclosed in fresh poppy leaves. They are then dried in the dark, in a cool place, and sold to travelling merchants. The opium thus obtained is specifically light, and of a reddish yellow hue. Its fracture is more or less smooth and presents a resinous appearance, being translucent at the edges. Specimens collected on the spot by Figari Bey yielded him as much as 9 or 10 per cent. of morphine. Having passed into the hands of the middlemen, who sell it to the merchants, it is only too frequently adulterated in the most shameful manner. The adulterant is not always the same being sometimes a strong mucilage of gum arabic, at others the pulp of the fruit of the *Rhamnus lotus*, or even the pounded poppy capsule itself. As physician and director of the military pharmacy Figari Bey has made the adulterations of opium one of his particular studies, and by steadily refusing to allow his officers to purchase this drug except upon assay, has done much to improve the commercial quality of the Egyptian opium. M. Gastinel, the director of the school of pharmacy at Cairo, has also aided considerably by making various experiments upon the culture of the poppy as an opium-producing plant in the gardens of the Acclimatization Society in that city, although it would seem that the hitherto low quality of Egyptian opium has been due more to culpable adulteration than to negligent cultivation. These few facts will show that both the art and science of pharmacy is once more beginning to assume a position of the greatest importance in the land of the Ptolemies. Figari Bey also shows a large collection of mineral produce from all parts of Egypt, amongst which may be mentioned natron from Darfour, which is probably the same locality as that from which the natron mentioned in Scripture was obtained. Some specimens of magnesian mineral, from the district from which the name is derived, are also interesting.

In China and Japan a large number of drugs were shown, but as the descriptions were in the choicest celestial characters, it is useless to say much about them. The specimens of rock crystal from Japan were truly magnificent. The United States made a very disappointing display in the way of chemical and pharmaceutical products, although the exhibition of minerals of every description from California, Alabama, Colorado, and other States was simply superb. The only show of chemicals worth mentioning was the collection of coal tar dyes, shown by Halliday and Co., whose famous legal battle with Messrs. Simpson, Maule, and Nicholson, must be within the recollection of our readers.

Brazil showed a large number of specimens of balsam of capivi, and various oils and fats that enter largely into Brazilian medical practice as specifics for various nervous disorders. Amongst them may be mentioned oils and fats of the ounce, the jaguar, the boa, the cayman, the fox, several species of serpents and fish, and the tapir. There were also some remarkable specimens of guaraná, which is a kind of

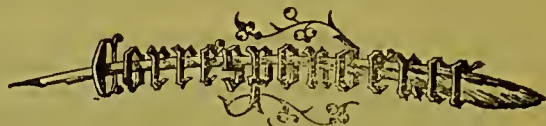
cocoa, prepared from the *Paullinia sorbilis*, and contains theine in notable quantities. It is much consumed as a beverage throughout South America. Peckolt, of Rio, showed a large number of proximate principles and alkaloids prepared from various Brazilian plants, such as *Agoniadine*, from the *Agoniada (Plumeria) lanceifolia*, and *Angeline*, prepared from the *Angelim pedra*, which are said to be efficient substitutes for quinine, *Chenopoidine*, *Manihaline*, etc. A large number of plants, almost unknown in European pharmacy, were also exhibited, such as the *Mururé*, a powerful antisyphilitic, the *Carobinha*, a substitute for sarsaparilla, the *Maca de mato*, which possesses all the qualities of the cherry laurel, and a host of others. Good chemicals were shown by Vianna and Co., Vieira, Peckolt, Souza, and many others. To judge from the number of specimens exhibited, Brazil seems rich in medicinal plants whose therapeutical value is as yet undetermined. It is to be hoped that some of our leading men have visited and examined this interesting collection, and that we shall hear something about it at the next meeting of the Pharmaceutical Conference. It may interest our readers to know that the cultivation of the chinchona plant has been commenced in Brazil under very favourable circumstances.

The collection shown by the South American republics also presented many opportunities for study to the scientific pharmacist. Passing over the splendid collection of gold, silver, and copper ores contributed by the various republics, we noticed some fine specimens of hayesite (borate of lime), shown by Fuentes, of Lima. This natural product is found in large beds in the plain of Tamaragul, which is situated near Iquique in Peru, at the foot of the Cordilleras. In 1862 Messrs. Gaskell and Deacon showed borax made from this mineral, but we believe that its use for this purpose has not become general in this country. In France it is said to be used largely, not only as a source of borax, but also as its substitute in the composition of frits for fine pottery and porcelain, in glass-making, in enamelling, and in metal soldering. The consumption of this mineral in the United States is also increasing daily. Specimens of cubic nitre were also shown by the same exhibitor.

Numerous preparations of the coca leaf were also exhibited by several contributors. This valuable drug, which has hitherto received so little attention from European pharmacists, deserves a thorough investigation as to its properties as a therapeutic agent. The Coca (*Erythroxylon Peruvianum*) is a shrubby tree cultivated in the mountainous districts of Bolivia and Peru, and in some parts of Brazil. From time immemorial the leaves have been used by the Indians of these localities as a restorative of a very high order. According to the universal testimony of a host of South American travellers the power of the coca in restoring the physical forces after they have been wasted by fatigue is little short of miraculous. With a supply of fresh leaves and a little roasted maize the Indian runner is able to support an amount of fatigue that seems almost incredible to the European. The mails are carried across the Andes by Indians, who set out on a four or five days' journey, over the most difficult mountain paths, with nothing more in the way of provisions than a handful of maize and a bag of coca leaves. In many of the mines the Spanish workers have acquired the habit of chewing coca with the same increase of strength and power of endurance as is manifested in the Indians from its habitual use. The Indians use it as a remedy against every disorder, and call it the *Plant of Heaven*. The coca leaf has been examined chemically by Niemann and several other chemists, and has been found to contain a true alkaloid cocaine and a peculiar kind of tannic acid, which has been named cocatannic acid. Although Coca possibly does not possess all the miraculous powers attributed to it by the native Indians, still it appears undoubtedly to possess tonic and stimulant properties of a very high character, and which ought certainly to render it a most valuable therapeutic agent. But little attention appears to have been paid to it in this country; but in France M. Chevrier, of 21, Faubourg Montmartre, has lately introduced it into commerce in the form of a wine and an elixir. This gentleman now imports the leaves in hermetically sealed cases, and sells them in boxes containing thirty grammes, so that physicians may make their own experiments upon their therapeutic properties. From what we have said, it will be seen that the coca is deserving

of minute and careful examination as to its true properties as a remedy. If some of our readers would take the matter up, make a few preparations, and distribute them amongst their medical friends for experiment, we venture to think their trouble would be amply repaid by the result.

In describing the English and Indian departments it may be remembered that we expressed our regret that the samples of bark from Ootacamund had arrived too late to obtain the reward they deserved at the hands of the jury. We now learn, just as we are going to press, that they have been very justly included in the Agricultural portion of the Exhibition, the jury of which would only send in their list of rewards at the end of October, and that Mr. Markham has received a well-merited gold medal. We regret to find that the pioneers of chinchona cultivation, the Dutch, have failed to exhibit bark at all, and have thus lost their reward. Both the English and Dutch official mind seems to be fearfully and wonderfully constituted.



OUR JOURNAL.

TO THE EDITOR OF THE CHEMIST AND DRUGGIST.

SIR,—With regard to the alteration in the size of the CHEMIST AND DRUGGIST, I thought at the time, and still think, it is a very foolish one. The publication, as at first issued, makes, when bound, a compact volume, which will stand on any ordinary book-shelf. The present is an outlandish size, matching nothing but a very few extraordinary pamphlets of the same kind. The difficulty now is how the matter is to be remedied, as it will be very awkward to have a few volumes of a different size to the bulk. On the whole, however, I think the advantage is to return to the original size. It is unfortunate that the question was not discussed before the change was made four years ago. I think the Price Current may be very well dispensed with, as every chemist is regularly inundated with price lists from the wholesale houses. I think them a regular nuisance, as they are only looked over and destroyed. Indeed, the information they afford is so neglected that goods are often wrapped in them, and sent out. I heard a man in the trade complaining that the public know too much about the cost price of our goods, and yet he himself furnishes them with the best medium of obtaining the information.

I am,

Yours truly,

Barnstaple, October 21.

J. M. TATHAM.

TO THE EDITOR OF THE CHEMIST AND DRUGGIST.

SIR,—As a subscriber from the commencement, I would offer my opinion about again altering the size of the CHEMIST AND DRUGGIST. I certainly thought with Mr. Ince that the octavo form was most convenient for binding, but as the quarto has been used for a few years, it would now make our volumes look very irregular to go back to octavo: I think it would be making bad worse. To persons who have the volumes bound, it would be a source of annoyance to have another alteration made, and I hope such a thing will not be done.

A few wholesale druggists may wish you to withdraw the Price List. I am sure the retail chemists do not. It is for you to judge which branch of the trade gives you the greatest support. The retail trade at large buy your Journal, the wholesale give you advertisements; is not the preponderance in favour of pleasing the retail?

Why do you not give us an Oil Trade Report monthly by a good hand? Chemists are more inclined to speculate in oil than any other product, and a full report of the state of the market, and probable tendency, would much increase the value of your Journal. Wishing you success,

I am,

Yours truly,

A. B. C.

TO THE EDITOR OF THE CHEMIST AND DRUGGIST.

SIR,—I quite endorse the opinion of Joseph Ince, with respect to the size of the Journal. I am of opinion that the first size was the most convenient, and much more likely to be sought after.

As to the benefit of the Price Current, I think it perfectly useless to the trade. The information given by the Trade Report, it would, perhaps, be well to continue.

I am, sir,

Yours very truly,

GEORGE MANBY.

Southampton, October 23.

TO THE EDITOR OF THE CHEMIST AND DRUGGIST.

SIR,—Possibly you may remember that at the time you increased the size of your pages, I expressed my regret at the change. I now return to the subject, to draw your attention to some advantages in the small form. If you make your pages the size of the *Times*, they will be looked over when they come in; after once scanned they will be folded up and stowed away till they are old and dirty enough to be used for lighting the fire,—nobody will bind them.

If you retain the present size—too large in proportion to their number to be substantial—they are apt to be folded up, or crumpled and soiled, till a volume is complete. Then, for order's sake, they are sorted, tied up in volumes, and stowed away on the top shelf. Few people bind them, and fewer refer to them again when bound.

If you make them octavo—the favourite size for students' books and works of reference—there is a fair chance that they will be bound, not being too large to stand on the same shelf with the Journal or the handbooks, and being kept in sight and handy, are the more likely to be read and valued.

You will also, perhaps, remember that some time ago, I sent you a contribution, once a month. One or two of these articles I have repeatedly required to refer to. My numbers being in the second condition described above, I have hunted out my old results with a feeling, "It is a pity I buried them in a mass of waste paper;" and a further thought that "any other contribution to the CHEMIST AND DRUGGIST must be such as have a passing, but not a permanent interest." The large size of a newspaper's pages enables us, at a glance, to see the headings of the articles, and select what we will read; but the table of contents which is placed on the cover of a Journal, gives us the same information in a much more convenient manner.

I cannot see any advantage in the larger size, but as I am only one among many, I can but offer my remarks as expressing the feeling of one class of your readers.

Yours truly,

BARNARD S. PROCTOR.

Grey-street, Newcastle, October.

TO THE EDITOR OF THE CHEMIST AND DRUGGIST.

SIR,—Mr. Ince's sensible letter puts the question of the proper position of your Journal very fairly. Is it to be a literary organ or a business circular? Certainly, the latter, I say; and while by no means underrating the value of its literary and scientific contents, its principal aim will, I hope, always be to assist in developing the trade in its commercial capacity. Holding this view, it almost follows as a matter of course that the present is, in my humble opinion, the best form of publication. As an advertiser in, as well as a subscriber to the CHEMIST AND DRUGGIST, I much prefer the quarto to the octavo form, and that I am not alone in such opinion is proved by the unanimity with which this size is adopted by the medical journals. Twenty-four numbers would make a goodly volume; but would it not be possible to enlarge the Journal to twenty pages, and increase the subscription to 6s. per annum? Thanking you and the proprietors for furnishing us with so useful and readable an organ,

I am, yours truly,

A READER FROM THE FIRST.

ILLEGITIMATE TRAFFIC IN MEDICINES.

TO THE EDITOR OF THE CHEMIST AND DRUGGIST.

DEAR SIR,—I send you the enclosed extract from a Birmingham paper, and think that due publicity ought to be

given to the letter from Somerset House, as it refers to a very common practice, which affects the legitimate trade of the chemist and druggist. I am frequently asked for pennyworths of patent medicines, and find it is owing to the custom of grocers and little shopkeepers breaking open the stamped packages, and selling small quantities of the contents.

Although the sale of nostrums is a nuisance to the trade, yet, I think, we should be protected from any interference on the part of those who encroach upon our business by selling Epsom salts, castor oil, senna, sulphur and syrups, articles forming a good and legitimate source of profit to us, who in country places, have to keep so varied a stock.

I am sure we must all deplore that our business is so much mixed up with that of the perfumer and dealer in fancy goods; but so it necessarily must be, as long as our legislature permits any greengrocer to deal in medicines, and for the sum of three-halfpence accredits specious and often dangerous nostrums. Were it otherwise, we might, I am sure, maintain the dignity of a profession. I hope soon to see in all our towns, laboratories, and lecturers, for the benefit of our apprentices. In the meantime, I should much like to see in your columns a suggestion as to the course of studies most desirable, and a discussion upon the practicability of establishing local examining boards in each county. I, for one, think that the establishment of such boards is very desirable.

I am, sir,

Yours obediently,

ALIQUIS.

Madeley, Salop, October, 1867.

PATENT MEDICINES.

To the Editor of the Daily Gazette.

SIR,—A great many grocers, bucksters, etc., not content with their own legitimate trade, are now dabbling in physics, opening packages of patent medicines, and retailing the contents in small quantities; for example, "Whelpton's Pills," four for a penny. There are also, I am sorry to say, some chemists doing the same thing, on purpose to keep their customers from purchasing of these interlopers. Will you kindly have the enclosed letter from the Inland Revenue placed in your paper, so that should they, after this, be prosecuted by the Excise, they will have no excuse for saying they did not know they were breaking the law.

I remain, Sir, yours truly,

CHEMICUS.

(COPY.)

Inland Revenue, Somerset House, 4th October.

SIR,—The Board of Inland Revenue have had before them your letter of the 18th ultimo, and, in reply to the inquiry contained therein, I am directed to state that it is illegal to break open packages containing articles liable to medicine stamp duty and sell portions of their contents without stamps, and that any person so doing incurs a penalty of £10.

I am, Sir, your obedient servant,

J. SERGEANT.

THE HEIGHT OF ABSURDITY

TO THE EDITOR OF THE CHEMIST AND DRUGGIST.

SIR,—I am a regular reader of your Journal, including the advertisements, and as a constantly recurring phrase in the latter has puzzled me for years, I take the liberty of appealing to advertisers, through your columns, for a satisfactory explanation of its import.

Advertisers for assistants are continually telling the latter to "state height," and as out of a batch of thirty-one assistants advertising for places in your October issue twenty-nine of them carefully "state height," I presume that they perfectly understand the injunction, and gladly avail themselves of the opportunity of acknowledging its propriety. It is not so with me. The mystery of these words has long hung round me like a nightmare.

As you will readily conceive, Mr. Editor, my great difficulty in coming to any definite conclusion is occasioned by the fact, that no particular height is asked for. The simple injunction "state height," merely conveys to me the vague idea that chemists have some secret dread of being invigiled into an engagement with a "Chang" or a "Tom Thumb;" but surely such abnormal specimens of the *genus homo* do not abound in the pharmaceutical body? I can imagine the inconvenience of having either a giant or a dwarf behind a chemist's counter. But I must be all wrong—it cannot be to guard against such a danger, as there are other dangers of a similar nature and equally great, against which no precautions are taken. Suppose, for instance, that a London chemist engages from Yorkshire an assistant, height

five feet nine inches, and finds—alas, too late—that such assistant weighs twenty stone! Looking calmly at the possibility of such an occurrence, I naturally ask why should height be the only physical condition inquired into? Why not go a little further, and include at least weight and circumference?

I have sometimes thought, Mr. Editor, very absurdly, no doubt, that the matter I have ventured to write about, in the hope of receiving adequate light, is beneath the dignity of such a highly intelligent body as the chemists and druggists of England.

I have been present at certain hiring fairs, called "mops," and there I have seen that semi-emancipated serf, the English agricultural labourer, pretty closely examined as to height, weight, and condition by the hirer, indeed in much the same manner as an intending purchaser would examine a horse in a fair, and I have thought it rather degrading to my agricultural brother. But I suppose I am morbidly sensitive, and I dare say you will laugh at me for seeing anything degrading in this physical appraisalment, when the highly intelligent chemists of England, before engaging an assistant, ask him to "state height."

I am, Mr. Editor, yours most respectfully,
"EPSOM SALTS."

[In this admirable letter our correspondent lightly probes an ugly social sore. When pharmacy rises to its true position, we trust that the snobbish request to "state height," will give place to the more important injunction to "state educational qualifications."—ED. C. AND D.]

The Honorary Secretaries of the "Buott Testimonial Fund" present their compliments to the Editor of the CHEMIST AND DRUGGIST, and will feel much obliged by his kind insertion of the following:—

THE BUOTT TESTIMONIAL FUND.

Treasurers:—E. P. HORNBY, Esq., President of United Society of Chemists and Druggists; HENRY MATTHEWS, Esq., F.C.S., Past President.

TO THE CHEMISTS AND DRUGGISTS OF THE UNITED KINGDOM.

GENTLEMEN,—We sincerely congratulate you upon the fact that a Bill, which has received the concurrence of the Pharmaceutical Society, the United Society of Chemists and Druggists, and of the Trade generally, now only awaits the earliest opportunity to be introduced to Parliament.

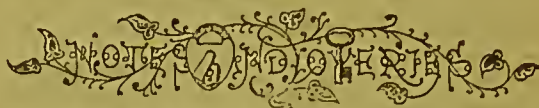
This Bill happily blends all our wishes and aspirations. Based upon the principle that the safety of the public can only be secured by duly qualified dispensers, it will practically incorporate the Trade, and exempt every Chemist and Druggist, who cares to be registered, from Jury service, and place every other privilege, right, or distinction within his reach, as a Member of the Pharmaceutical Society.

The day on which the amended Pharmacy Bill becomes law will commence a new era for Chemists and Druggists. Their social position will be improved, their businesses will be enhanced in value, the door of Pharmacy will be closed against all unqualified persons, profitless competition will be diminished, and a fair field will be opened for the investment of capital, the encouragement of industry, and the emulation of talent.

Such, in brief, are the advantages, in the immediate prospect of which we may rejoice; but we must not forget one whose ability, zeal, and energy have been so largely instrumental in this happy consummation. Mr. Buott brought into our service a rare and unpurchaseable combination of qualities, and a special fitness for his work; he has sacrificed his time, his health, his means, and unselfishly devoted almost a life's energy to our cause. How can we most appropriately and gracefully reward him? The 5th clause of the new Bill stipulates that the appointment of the Registrarship be given to the officer who now fulfils this duty for the Pharmaceutical Society, thus leaving Mr. Buott, at an advanced period of life, totally unprovided for. To be thus deserted would entail upon him a pecuniary anxiety that would be most ungenerous on the part of us who are well able to judge of his services. We, therefore, wish to place him beyond this, and to express our esteem for him, and our appreciation of his successful labours amongst us, in such a manner as will be a lasting honour to the Trade; and in furtherance of this, we now invite every

chemist and druggist in the United Kingdom to subscribe to this testimonial to Cyrus Buott.

For the Committee:—HORATIO PASS, chemist, Wandsworth-road, *Chairman*; ADOLPH BAUMGARTEN, chemist, 550, Oxford-street, W.C., WILLIAM A. YEATS, chemist, 254, Goswell-road, E.C., *Honorary Secretaries*.



LINIMENTUM TEREBINTHINÆ ACETICUM.—A correspondent of the *Lancet* thinks that the following form may be advantageously substituted for that of the new Pharmacopœia:—Acetic acid, two ounces; oil of turpentine, four ounces; white of one egg. Mix. This will make a beautiful, white, non-separating liniment.

VAGINAL SUPPOSITORIES.—The *Lancet* notices a proposition in a French journal to cast in a mould hollow cones of cocoa butter, to pour into them glycerine in which either tannin or morphine has been dissolved, and to close the cone with a plug of the same butter. The latter dissolves in the vagina as far as the hollow cone is concerned; but the plug, being thicker, resists, and the medicated glycerine remains in contact with the vaginal walls.

SULPHATE OF QUININE IN TETANUS.—Our contemporary calls attention to two cases of tetanus described by Dr. Poma. One refers to a woman who had been operated upon for a cancer of the breast. She was given fifteen grains of sulphate of quinine and six grains of solid opium daily. Seven days afterwards there was no improvement, and, as all feverishness had left her, the quinine was omitted, and fifteen grains of opium per diem were given for one month, when all the tetanic symptoms disappeared. The other case is that of a woman who had met with a small wound of one of her toes. She had the same doses as had been administered in the preceding case, and also recovered.

INK POWDERS.—With reference to our notice of the case of Dowthwaite v. Wimble and Nutt, in the September number, Mr. Dowthwaite writes: "The result of the action was merely that I had not the *exclusive* right to the manufacture of the British Ink Powders. I beg to announce that I continue exercising my right to the manufacture of the same and supplying my agents as heretofore."



IN Chemicals business continues on a limited scale only. Exporters, as well as the home trade, buy for immediate wants; and prices remain much the same. Except in a few cases where sales have been pressed, buyers have purchased on rather more favourable terms. The sales in Tartaric Acid have been small at 13½d. for English, and 13d. for Foreign. A large business was done at the end of last month in Citric Acid, and the price advanced to 1s. 11½d. to 2s.; there are now few sellers under the latter price. More business has been done in Oxalic Acid at 8d. to 8½d., at which rates the market is now quiet. Sal Acetos is quiet at 11½d. to 12d. A fair business has been done in Quinine, and the price of French is now steady at 4s. 3d.; English is quiet at 4s. 9d. to 4s. 10d. Several sales made in Chlorate of Potass at 11½d. to 12d. Rather more inquiry for Iodine, and the price is steady at 9d. to 9½d. A fair business done in Alum at £7 10s. to £7 15s., according to package. Cream of Tartar is dull at 80s. to 81s. for the best. Soda Crystals are better; last sales made at 97s. 6d. ex ship. Ash is steady at 2½d. to 2¾d. Bicarbonate is slow at 14s.; and Caustic at 17s. up to 24s. Flour of Brimstone has sold to a fair extent at 13s. 6d. to 14s. 6d.; and Roll 10s. 6d. to 11s. A few sales have been made in Sulphate of Copper at 24s. 6d. to 25s. 6d. Sulphate of Ammonia is quiet at 13s. to 14s. Sal Ammoniac is steady at 33s. 6d. to 35s. 6d. Linseed Oil has declined, and is dull at 36s. 6d. on the spot.

and 36s. for the first four months. A large business has been done in Brown Rape at 37s. 6d. on the spot, and 39s. 6d. to 39s. 9d. for the first four months. Petroleum declined to 1s. 4½d., at which large sales were made; it has since become firmer, and closed at 1s. 5d. to 1s. 5½d. for standard white. Nothing done in Crude. Turpentine is rather better, and closed at 27s. 6d. Rosin is without change.

The sales of Drugs have been unimportant. A recent import of Gamboge sold at £37 10s. to £43. A few sales in Turkey Blue Galls made at £5, which is rather lower. A large business has been done in Cutch, and the price has advanced to 45s. to 47s. 6d. Gambier is lower; Cubes selling at 24s. 6d., and Block 16s. 3d. to 16s. 6d. East India Arabie sells well, and fine qualities are rather dearer. Turkey is steady. Castor Oil is a trifle better. Cod Liver Oil is quiet, the late sales were chiefly taken in. Cocculus Indicus is lower. Oil of Cassia is rather cheaper. A few sales made in Oil Aniseed at 12s. 1½d. to 12s. 3d. Citronelle is steady at 3d. New Camomile Flowers sold at 68s. to 77s. 6d. Bark is without change. A few lots Turkey Opium sold at 16s. 6d. to 17s. Some fine Tonquin Musk sold at 35s. to 37s. 6d. Sarsaparilla is without change. Balsam Capivi is quiet at 1s. 6d. Cubebs are easier, fair quality sold at 45s. to 47s. 6d. Good and fine Cape Aloes sold at 31s. to 32s. Small sales of Ipecacuanha made at 7s. to 7s. 3d., which is 3d. cheaper. Jalap is without change. Squills are lower, good fresh selling at 1½d. to 2d. Saltpetre is rather lower, fine is now 19s. 3d. to 19s. 6d.; Refined steady at 23s. to 24s. Jamaica Beeswax is rather dearer, and more in request. Jamaica Logwood is more in demand. Some parcels of Rhubarb sold at late rates. Senna is without change. Camphor is dull, and rather lower. Other goods, no variation worth report.

PRICE CURRENT.

These quotations are the latest for ACTUAL SALES in Mincing Lane. It will be necessary for our retail subscribers to bear in mind that they cannot, as a rule, purchase at the prices quoted, inasmuch as these are the CASH PRICES IN BULK. They will, however, be able to form a tolerably correct idea of what they ought to pay.

	1867. s. d.	1867. s. d.	1866. s. d.	1866. s. d.
ARGOL, Cape, per cwt.	60 0	70 0	70 0	80 0
French	48 0	70 0	56 0	76 0
Oporto, red	26 0	28 0	30 0	32 0
Sicily	50 0	55 0	67 6	70 0
Naples, white	60 0	70 0	66 0	71 0
Florence, white	75 0	80 0	85 0	90 0
red	65 0	70 0	77 0	80 0
Bologna, white	78 0	80 0	87 0	90 0
ARROWROOT, (duty 4½ per cwt.)				
Bermuda, per lb.	1 2	1 4	1 0	1 4
St. Vincent	0 2½	0 5½	0 2½	0 5½
Jamaica	0 2½	0 3½	0 3	0 4½
Other West India	0 0	0 0	0 2	0 3½
Brazil	0 0	0 0	0 2½	0 3
East India	0 1½	0 3	0 2½	0 4
Natal	0 3½	0 8	0 3½	0 7½
Sierra Leone	0 4	0 4½	0 3½	0 4
ASHES, per cwt.				
Pot, Canada, 1st sort	33 6	0 0	37 0	45 0
Pearl, ditto, 1st sort	37 0	0 0	45 0	0 0
BRIMSTONE,				
rough, per ton	137 6	140 0	130 0	0 0
roll	210 0	220 0	195 0	205 0
flour	270 0	280 0	245 0	260 0
CHEMICALS,				
Acid—Acetic, per lb.	0 4	0 0	0 4	0 0
Citric	2 0	0 0	1 11½	2 0
Nitric	0 5	0 5½	0 5	0 5½
Oxalic	0 8	0 8½	0 11	1 0
Sulphuric	0 0½	0 1	0 0½	0 1
Tartaric crystal	1 1	1 1½	1 3½	1 3½
powdered	1 2	0 0	1 5	1 5½
Alum	150 0	155 0	150 0	155 0
powder	170 0	0 0	170 0	0 0
Ammonia, Carbonate, per lb.	0 5	0 5½	0 5½	0 5½
Sulphate	260 0	280 0	220 0	240 0
Antimony, ore	0 0	220 0	200 0	220 0
crude	23 0	24 0	24 0	25 0
regulus	48 0	0 0	84 0	0 0
French star	48 0	0 0	34 0	0 0
Arsenic, lump	16 0	16 6	15 0	15 6
powder	7 6	7 0	6 6	7 0
Bleaching powder	12 0	13 0	15 0	15 6
Borax, East India refined	0 0	0 0	0 0	0 0
British	65 0	67 6	65 0	0 0
Calomel	2 5	0 0	2 5	2 6
Camphor, refined	1 10½	0 0	1 8	0 0
Copperas, green	55 0	60 0	52 0	55 0
Corrosive Sublimata, per lb.	1 11	0 0	1 11	0 0
Green Emerald	0 0	0 0	0 0	0 0
Brunswick	0 0	0 0	0 0	0 0

	1867. s. d.	1867. s. d.	1866. s. d.	1866. s. d.
CHEMICALS,				
Iodine, dry	0 0	0 0½	0 0½	0 0½
Magnesia, Carbon	42 6	0 0	42 6	45 0
Calcinad	1 0	1 8	1 6	1 8
Mnium, red	21 6	22 0	22 0	23 6
orange	33 6	0 0	32 0	0 0
Potash, Bichromate	0 5	0 0	0 5½	0 5½
Chlorate	1 0	1 0½	1 1	0 0
Hydriodate	12 0	0 0	0 0	0 0
Prussiate	1 0½	1 1	1 0½	1 1
red	1 0½	1 10	1 9½	1 10
Precipitate, red	2 6	0 0	0 0	2 6
white	0 0	2 5	2 5	0 0
Prussian Blue	1 0	1 10	1 0	1 10
Rose Pink	20 0	0 0	29 0	0 0
Sal-Acetos	0 11½	1 0	1 1	0 0
Sal-Ammoniac				
British	33 6	35 6	35 0	37 6
Salts, Epsom	8 0	8 9	8 6	9 6
Glauber	5 6	6 0	5 0	6 0
Soda, Ash	0 2½	0 2½	0 2½	0 3½
Bicarbonate	14 0	0 0	20 0	21 6
Crystals	07 6	0 0	125 0	127 6
Sugar Lead, white	37 6	38 0	38 0	0 0
brown	28 0	29 0	27 0	0 0
Sulphate Quinine	4 0	4 10	5 0	0 0
British, in bottle	4 3	0 0	4 5	4 6
Foreign	0 0	0 0	0 0	0 0
Sulphate Zinc	0 0	0 0	0 0	0 0
Verdigris	0 11	1 0	0 11	1 0
Vermilion, English	2 9	3 4	2 0	3 0
China	2 6	2 8	2 6	2 9
Vitriol, blue or Rom.	24 6	26 0	25 6	28 0
COCHINEAL, per lb.				
Honduras, black	3 3	4 4	3 0	4 7
silver	2 6	3 10	3 0	3 9
Mexican, black	3 3	3 7	3 5	3 9
silver	3 0	3 1	3 5	3 7
Lima	0 0	0 0	0 0	0 0
Teneriffe, black	3 3	4 0	3 5	4 10
silver	3 0	3 8	3 4	3 8
DRUGS,				
Aloes, Hepatic	80 0	180 0	180 0	190 0
Socotrine	180 0	290 0	140 0	290 0
Cape, good	30 0	32 0	36 0	40 0
inferior	17 0	29 0	20 0	35 0
Barbadoes	80 0	250 0	52 0	260 0
Ambergris, grey	35 0	40 0	0 0	35 0
Angelica Root	0 0	0 0	28 0	36 0
Aniseed, China etar	0 0	120 0	75 0	78 0
German, &c.	30 0	42 0	28 0	40 0
Balsam, anada	1 5	1 6	1 8	1 9
Capivi	1 6	0 0	1 10	1 10½
Peru	6 9	0 0	5 6	0 0
Tolu	2 3	2 9	3 0	0 0
Bark, Cascarilla	16 0	28 0	18 0	29 0
Peru, crown & grey	1 4	2 0	1 3	2 2
Calisaya, flat	2 6	2 9	2 6	2 8
quill	2 2	2 6	2 0	2 5
Carthageua	0 10	1 4	1 0	1 6
Pitayo	0 9	1 8	0 7	2 0
Red	2 6	12 0	2 6	12 0
Bay Berries	0 0	0 0	0 0	0 0
Bucca Leaves	0 2½	0 9	0 8½	0 10
Camomile Flowers	35 0	30 0	40 0	120 0
Camphor, China	135 0	140 0	130 0	132 6
Canella alba	22 0	27 0	75 0	82 6
Cantharides	1 10	0 0	2 6	2 7
Cardamoms, Malabar, good	7 6	8 0	5 6	6 3
inferior	5 0	7 0	8 9	5 3
Madras	5 0	7 6	3 6	5 3
Ceylon	2 3	2 9	3 6	4 0
Cassia Fistula	20 0	32 0	18 0	35 0
Castor Oil, 1st pale	0 0½	0 7½	0 7	0 7½
2nd	0 6	0 6½	0 6½	0 7
inferior and dark	0 5½	0 6	0 0	0 6½
Bombay, in casks	0 5½	0 0	0 5½	0 6
Castorum	1 0	20 0	1 0	20 0
China Root	28 0	30 0	20 0	40 0
Cocculus Indicus	28 0	28 0	26 0	30 0
Cod Liver Oil	8 0	6 0	4 0	8 0
Colocynth, apple	0 7	0 11	0 7½	1 0
Colombo Root	25 0	50 0	80 0	100 0
Cream Tartar				
French	80 0	81 0	82 6	85 0
Venetian	0 0	0 0	87 6	0 0
grey	72 0	75 0	80 0	82 6
brown	70 0	72 6	60 0	0 0
Croton Seed	80 6	105 0	240 0	260 0
Cubebs	45 0	48 0	67 6	72 6
Cumin Seed	17 0	20 0	17 0	23 0
Dragon's blood reed	200 0	220 0	240 0	340 0
lump	85 0	230 0	85 0	280 0
Galangal Root	19 0	20 0	11 0	12 6
Gentian Root	16 0	0 0	16 0	17 0
Guinea Grains	50 0	0 0	62 0	68 0
Honey, Narbonne	50 0	70 0	50 0	70 0
Cuba	26 0	41 0	23 0	40
Jamaica	23 0	55 0	25 0	0 0
Ipecacuanha	7 0	7 3	10 6	11 0
Isinglass, Brazil	2 0	3 10	2 2	4 9
East India	1 10	4 2	1 10	4 7
West India	3 8	3 11	3 9	4 1
Russian	9 6	10 6	8 0	11, 6
Jalap	0 9	5 0	0 9	5 6

DRUGS—continued.					OILS—continued.				
	1867.	1867.	1866.	1866.		1867.	1867.	1866.	1866.
	s. d.	s. d.	s. d.	s. d.		s. d.	s. d.	s. d.	s. d.
Juiper Berries . . . per cwt.	9 6	10 0	8 6	19 0	Madras per cwt.	54 0	55 0	50 0	51 0
Gorman and French . .	9 0	10 0	9 0	10 0	Palm, fino	40 0	40 6	43 0	44 0
Italian	0 0	0 0	0 0	0 0	Linseed	36 6	36 9	37 6	38 0
Lemon Juice per deg.	0 0	0 0	0 0	0 0	Rapeseed, English, pale . .	30 6	0 0	41 6	42 0
Liquorice per cwt.	65 0	70 0	65 0	75 0	brown	37 6	0 0	38 6	39 0
Spanish	50 0	60 0	50 0	70 0	Foreign pale	40 6	41 0	43 6	44 0
Italian	3 9	4 6	4 9	5 0	brown	38 0	0 0	42 6	0 0
Manna, flaky	1 0	1 6	1 10	2 0	Lard	62 0	0 0	60 0	61 0
small	17 0	36 0	18 6	33 0	Tallow	36 0	38 0	35 0	36 0
Musk per oz.	12 0	14 0	9 0	11 0	Rock Crude per ton	£11 10	0 0	£15 0	0 0
Nux Vomica	15 0	17 0	17 6	19 6	Oils, Essential—				
Opium, Turkey	3 6	7 0	3 6	7 0	Almond, essential . . . per lb.	35 0	0 0	40 0	0 0
Egyptian	30 0	40 0	32 0	37 0	expressed	1 10	0 0	2 3	0 0
Orris Root per cwt.	0 10	0 11	3 6	4 0	Aniseed	12 0	12 3	0 2	9 3
Pluk Root per lb.	130 0	135 0	110 0	180 0	Bay per cwt.	80 0	00 0	80 0	00 0
Quassia (bitter wood) per ton	0 4	1 0	0 0	1 0	Bergamot per lb.	11 3	19 0	10 0	16 0
Rhatany Root per lb.	2 6	9 6	2 6	10 0	Cajeputa, (in bond) . . . per oz.	0 2	0 2	0 2	0 3
Rhubarb, China, round . .	2 0	7 6	2 0	7 6	Caraway per lb.	5 0	6 0	5 0	6 0
flat	9 0	12 0	0 0	10 0	Cassia	0 6	6 8	7 9	0 0
Dutch, trimmed . . .	9 0	10 0	9 0	10 0	Cinnamon (in bond) . . . per oz.	1 3	3 5	1 6	3 9
Russian	32 0	36 0	32 0	36 0	Cinnamon Leaf	0 4	0 6	0 4	0 6
Saffron, Spanish	125 0	130 0	120 0	130 0	Citronel	0 3	0 3	0 3	0 5
Salop per cwt.	1 0	1 4	1 0	1 4	Clove	2 7	0 0	2 8	0 0
Sarsaparilla, Lima	0 11	1 1	0 11	1 1	Croton	1 2	1 6	1 2	1 6
Para	0 10	1 5	0 10	1 6	Juniper per lb.	1 6	1 0	1 0	2 0
Honduras	1 0	2 1	1 0	2 2	Lavender	2 0	3 0	2 0	3 3
Jamaica	8 0	0 0	8 0	0 0	Lemon	5 0	8 0	5 0	7 0
Sassafras per cwt.	30 0	38 0	30 0	44 0	Lemongrass per oz.	0 5	0 7	1 0	1 2
Scammony, virgin . . . per lb.	11 0	23 0	12 0	23 0	Mace, ex	0 6	0 7	0 1	0 2
second	1 6	0 0	1 9	2 0	Neroli	3 6	4 0	3 6	4 6
Seneka Root	0 0	0 0	0 0	0 0	Nutmeg	0 6	0 7	0 3	0 0
Senna, Calcutta	0 2	0 4	0 3	0 5	Orange per lb.	5 0	7 6	5 0	7 7
Bombay	0 1	0 9	0 3	0 9	Otto of Roses per oz.	17 6	20 0	17 0	20 0
Tinnovely	0 5	0 10	0 4	0 10	Peppermint, per lb.				
Alexandria	2 4	2 6	7 3	0 0	American	21 0	21 0	10 0	16 6
Snake Root	1 0	0 0	0 0	1 2	English	32 0	42 0	28 0	30 0
Spermaceti, refined . . .	0 1	0 2	0 2	0 3	Rhodium per oz.	0 0	0 0	0 0	0 0
Squills	19 0	29 0	26 0	28 0	Rosemary per lb.	1 0	2 0	1 9	2 0
Tamarinds, E. India, per cwt.	16 0	28 0	12 0	22 0	Sassafras	3 0	3 6	3 0	3 6
West India	16 3	24 6	22 6	30 0	Spearment	16 0	25 0	21 0	0 0
Terra Japonica—					Spike	0 0	0 0	0 0	0 0
Gambier per cwt.	28 0	45 0	20 0	32 0	Thymo	2 0	4 0	1 8	2 0
Cutch	20 0	20 0	20 0	29 0	PITCH, British per cwt.	8 6	0 0	8 6	0 0
Valerian Root, English . .	4 0	10 0	5 0	14 0	Swedish	0 0	0 0	0 0	0 0
Vanilla, Mexican per lb.	5 6	6 0	5 0	6 0	SALT PETRE, per cwt.				
Wormseed per cwt.	180 0	220 0	160 0	210 0	English, 0 per cent. or under	10 0	19 6	19 0	20 0
GUM—Ammoniac, drop, per cwt.	100 0	160 0	70 0	125 0	over 6 per cent. . . .	18 8	18 0	10 0	19 6
lump	200 0	220 0	210 0	230 0	Madras	15 0	16 0	17 0	19 0
Animi, fino palo	180 0	100 0	100 0	200 0	Bombay	14 0	17 0	14 0	19 6
bold amber	100 0	180 0	100 0	180 0	British-refined	23 0	24 0	24 0	25 0
medium	100 0	150 0	100 0	150 0	Nitrate of soda	10 6	11 0	11 0	13 0
small and dark	70 0	105 0	60 0	97 0	SEED, Canary per qr.	70 6	74 0	56 0	64 0
ordinary dark	88 6	05 0	110 0	115 0	Caraway, English per cwt.	44 0	46 0	0 0	0 0
Arabic, E. I., fine pale picked	73 0	85 0	95 0	103 0	German, &c.	40 0	48 0	0 6	0 0
unsorted, good to fine	55 0	08 0	55 0	00 0	Coriander	18 0	20 0	0 0	0 0
red and mixed	35 0	45 0	45 0	50 0	East India	0 0	0 0	0 0	0 0
siftings	100 0	220 0	170 0	200 0	Homp	42 0	44 0	44 0	46 0
Furkoy, picked, good to fine	85 0	160 0	05 0	160 0	Linseed, Black Sea	65 0	0 0	62 0	63 0
second and inferior . .	70 0	85 0	46 0	70 0	Calcutta	67 6	0 0	67 0	0 0
in sorts	43 0	45 0	64 0	66 0	Bombay	68 6	0 0	68 0	0 0
Gedda	70 0	75 0	95 0	100 0	Egyptian	0 0	0 0	0 0	0 0
Babary, white	85 0	00 0	85 0	00 0	Mustard, brown per bush.	0 0	0 0	0 0	0 0
brown	57 0	62 0	00 0	68 0	white	8 0	10 6	0 0	0 0
Australian	57 0	00 0	35 0	05 0	Poppy, East India per qr.	50 0	60 0	57 0	58 0
Assafetida, fair to good . .	300 0	700 0	300 0	400 0	Rape, English	0 0	0 0	0 0	0 0
Benjamin, 1st quality . . .	240 0	850 0	240 0	300 0	Danube	58 0	0 0	54 0	55 0
2nd	50 0	240 0	50 0	240 0	Calcutta fine	58 0	0 0	52 0	53 6
3rd	65 0	70 0	70 0	80 0	Bombay	55 0	61 0	59 0	60 0
Copal, Angola, red	0 0	0 0	85 0	90 0	Tcol, Sesny or Gngy	61 0	65 0	65 0	68 0
palo	64 0	68 0	60 0	80 0	Cotton per ton	200 0	220 0	160 0	170 0
Bengucla	0 4	0 11	0 4	0 11	Ground Nut Kernels per ton	370 0	0 0	340 0	350 0
Sierra Leone . . . per lb.	26 0	45 0	25 0	48 0	SOAP, London yol. . . per cwt.	28 0	32 0	28 0	32 0
Manilla per cwt.	05 0	75 0	52 6	61 0	mottled	32 0	30 0	32 0	36 0
Dammar, pale per cwt.	240 0	280 0	200 0	210 0	curd	46 0	50 0	46 0	50 0
Galbanum	760 0	860 0	500 0	600 0	Castile	40 0	42 0	40 0	42 0
Gamboge, picked, pipe . . .	000 0	700 0	400 0	460 0	Marseilles	40 0	42 0	40 0	42 0
in sorts	0 0	2 6	0 7	1 10	Soy, China per gal.	2 0	0 0	2 0	3 0
Guaiaicum per lb.	140 0	150 0	200 0	350 0	Japan	0 0	0 0	0 0	0 0
Kino per cwt.	30 0	75 0	27 0	75 0	Sponge, Turkey, fine picked	12 0	14 0	14 0	18 0
Kowrie	5 6	6 6	10 0	11 0	fair to good	5 0	11 0	6 0	12 0
Mastic, picked per lb.	150 0	180 0	150 0	180 0	ordinary	2 0	4 0	1 8	4 0
Myrrh, gd. and fine, per cwt.	80 0	140 0	80 0	140 0	Bahama	0 8	1 0	0 8	2 6
Olibanum, pale drop	77 6	85 0	00 0	75 0	TURPENTINE, Rough, per ct.	0 0	0 0	11 6	12 0
amber and yellow . . .	67 0	75 0	50 0	68 0	Spirits, French	27 6	0 0	40 0	46 6
mixed and dark	24 0	40 0	20 0	46 0	American, in casks . . .	27 6	0 0	42 0	42 6
Senegal	90 0	05 0	100 0	115 0	WAX, Bees, English	180 0	190 0	180 0	185 0
Sandrac	80 0	97 6	80 0	100 0	German	170 0	190 0	195 0	200 0
Tragacanth, leaf	220 0	320 0	200 0	280 0	American	150 0	170 0	185 0	190 0
in sorts	80 0	200 0	70 0	180 0	white fine	0 0	0 0	0 0	0 0
ILS per tun	£ 2	£ 10	£ 8	£ 8	Gambia	105 0	175 0	160 0	170 0
Seal	36 0	40 10	43 0	48 0	Mogadore	170 0	175 0	175 0	190 0
Sporm, body	112 0	0 0	120 0	127 0	East India	130 0	160 0	140 0	105 0
Cod	36 0	37 0	48 10	0 0	ditto, bleached	160 0	100 0	160 6	190 0
Whale, Greenland	0 0	0 0	0 0	0 0	vegetable, Japan	165 0	215 0	190 6	220 0
South Sea, palo	80 10	0 0	42 0	45 0	WOOD, Dye, per ton	54 0	05 0	54 0	88 0
East India Fish	35 0	0 0	35 0	0 0	Fustic, Cuba	150 0	175 0	155 0	165 0
Olive, Galipoli per ton	60 0	70 0	61 0	62 0	Jamaica	130 0	135 0	100 0	110 0
s. d.	s. d.	s. d.	s. d.	s. d.	Savanna	120 0	130 0	120 0	130 0
Florence, half-chest . .	0 0	0 0	0 0	0 0	Zanto	0 0	0 0	0 0	0 0
Coccanut, Cochín per cwt.	56 0	57 0	58 6	00 0	Logwood, Campachy	165 0	170 0	165 0	180 0
Ceylon	51 0	52 0	48 6	40 0	Honduras	100 0	105 0	100 0	105 0
Sydney	45 0	50 6	48 0	40 0	St. Domingo	82 0	85 0	00 0	85 0
Ground Nut au Gin	50 0	0 0	53 0	0 0	Jamaica	77 0	80 0	80 0	82 6
Bombay	50 0	0 0	53 0	0 0					



